

# **Options and Constraints for Breastfeeding in the Context of HIV**

**- A study of Parents Perspective in Lusaka and Kitwe Districts, Zambia**

By

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## **Dedication**

**To my dear children Kayanda, Chita and Besa Emmanuel 'Tagwaza' for your endurance to stay without a mother for the whole period I was away. You are my inspiration.**

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## **ABSTRACT**

### **Options and Constraints for Breastfeeding in the context of HIV- A study of Parents Perspectives in Lusaka and Kitwe Districts, Zambia**

Great strides are being made in trying to prevent postnatal Mother to child transmission of HIV AIDS. One of the strategies is through counselling on infant feeding options to HIV mothers, using the UNAIDS/WHO/UNICEF guidelines on infant feeding options. It is not clear how these feeding options and women's knowledge of HIV transmission through breast milk is influencing mothers with unknown status in their feeding practices.

The purpose of the study was to describe perceptions of the community regarding breastfeeding based on their current knowledge of HIV transmission through breastfeeding, their attitudes and beliefs about breastfeeding and HIV, and their perceived risk of infecting the child through breastfeeding. The study was exploratory involving 39 in-depth interviews and 7 focus group discussions with mothers and fathers of children below one year and pregnant women with previous breastfeeding experience. The study was conducted in Lusaka where there are interventions to reduce MTCT and in Kitwe.

There was a fair amount of knowledge about chances of HIV transmission through breastfeeding among all study participants. Informants in Lusaka seemed more knowledgeable about the risk factors for HIV transmission. However, their knowledge about postnatal transmission of HIV was not matched with feeding practices. Results also show that misconceptions exist about breastfeeding and HIV in both areas. Despite the knowledge of the threat of HIV infection, attitudes towards breastfeeding remain positive as most participants said breastfeeding should still be promoted because they felt not everyone was infected, that exclusive breastfeeding reduced the chances of diarrhoea in children that breast milk substitutes were beyond the reach of most households;

Data from this study suggest that there are several factors that influence decision making about exclusive breastfeeding in an era of HIV/AIDS. These include own experience with exclusive breastfeeding, perceived value of breast milk, their own traditional knowledge, including attitudes and perceptions about breastfeeding and HIV. These factors may both negatively and positively influence the feeding decisions.

These results have implications for health care providers using infant feeding options as a strategy to prevent mother to child transmission of HIV.

## **Abbreviations**

<b>AIDS</b>	<b>Acquired Immune Deficiency Syndrome</b>
<b>ANC</b>	<b>Ante Natal Clinics</b>
<b>ARI</b>	<b>Acute Respiratory Infections</b>
<b>ARVS</b>	<b>Antiretroviral drugs</b>
<b>BFHI</b>	<b>Baby Friendly Hospital Initiative</b>
<b>BMS</b>	<b>Breast Milk Substitutes</b>
<b>EBF</b>	<b>Exclusive Breastfeeding</b>
<b>FGDs</b>	<b>Focus Group Discussions</b>
<b>HIV</b>	<b>Human Immunodeficiency Virus</b>
<b>MTCT</b>	<b>Mother - To – Child - Transmission</b>
<b>MF</b>	<b>Mixed feeding</b>
<b>PMTCT</b>	<b>Prevention of Mother -To- Child- Transmission</b>
<b>STDs</b>	<b>Sexually Transmitted Diseases</b>
<b>UNAIDS</b>	<b>Joint United Nations Programmes on HIV/AIDS</b>
<b>UNICEF</b>	<b>United Nations Children’s Emergency Fund</b>
<b>VCT</b>	<b>Voluntary Counselling and Testing</b>
<b>WHO</b>	<b>World Health Organisation</b>
<b>ZDHS</b>	<b>Zambia Demographic and Health Survey</b>
<b>ZEBS</b>	<b>Zambia Exclusive Breastfeeding</b>

## **1.0 Introduction**

### **1.1 Problem Statement**

Strong investment in prevention of Mother-to-child-transmission (MTCT) of HIV is one of the most cost effective interventions available in the fight against AIDS.(1) There are a number of pilot studies and evaluations that have taken place on prevention of mother to child transmission of around the world, including Zambia. Based on some of these studies, the Ghent International Working Group on MTCT of HIV developed public health policy options to integrate these interventions into basic and maternal and child health services.(2) Zambia is one of the countries that is among several African countries that is receiving support from UNAIDS to assess the feasibility of integrating activities aimed at reducing MTCT of HIV including Antiretroviral (ARV) drugs in existing reproductive care services. The mother child package in this initiative has a number of elements among which include integration of a minimum package of care including AZT and formula into antenatal, delivery and child care services; and provision of good quality voluntary and confidential counselling and HIV testing for pregnant women and their partners including counselling on feeding options. HIV positive mothers are offered infant formula as an option to breastfeeding. Of the initial six sites, several other working sites have been included as part of scaling up.

While Voluntary Counselling and Testing (VCT) is a critical entry point to MTCT uptake is low. In the settings where PMTCT of HIV has been integrated in antenatal services in the country VCT stands at 22%.(3) The Zambia Demographic and Health Survey (ZDHS) of 2001-02 reports that 9.4 percent of women aged 15-49 years have had an HIV test. More women in reproductive age (55%) according to the report believe that HIV can be transmitted from mother to child during pregnancy, delivery and breastfeeding. The national HIV prevalence rate in Zambia has dropped from 20 percent to 16% according to the 2001-02 ZDHS report.(4) The findings of this survey were consistent with the antenatal clinic based surveillance data for 2001.(5) This means that the majority of the population either do not know their HIV status or are negative.



According to the UNAIDS/WHO/UNICEF guidelines and recommendations (6) breastfeeding should still be promoted among populations of unknown HIV status or those who are negative. Zambia has been part of the global movement to promote breastfeeding as a child survival strategy due to its many benefits. Accordingly major promotional campaigns were designed in most parts of the country, especially focussing on exclusive breastfeeding (EBF). But with all the dilemmas that have been posed to the HIV positive mothers, there is not enough published literature that provides information on how the rest of the population are responding to issues of breastfeeding in the context of HIV/AIDS.

The Zambia National Health Strategic Plan 2001-2005 (7) recognises HIV/AIDS and child health as public health priority areas. In particular the need for confirming, validating and adopting best practices based on nations lessons learned has been emphasised. This study is an effort to contribute to filling in the gap on information regarding how the community, especially those in areas where PMTCT is being implemented respond to issues of HIV and MTCT in order to try and provide some leads of the unintended effects of the programme. It is hoped that the results of this study will also help in understanding how we can still promote, protect and support breastfeeding in particular in resource poor countries where this child survival strategy is being threatened by HIV/AIDS. The findings of this study may not only provide insights to Zambia but to other resource poor countries that are faced with the dilemma of infant feeding options in view of HIV transmission through breast milk.

The current study aimed at trying to explore the perceptions, experiences and or opinions of mothers and fathers who do not know their status or are negative on promoting breastfeeding in view of HIV, based on their knowledge of transmission and perceptions on breastfeeding and HIV.

## **1.2 Research questions**

- Do women consider themselves at high risk of being infected and infecting their children through breast milk?

- Is mothers' knowledge of HIV transmission affecting the women of unknown HIV status and those negative in the infant feeding choices?
- What are the community opinions and perspectives of promoting breastfeeding in the era of high HIV prevalence?
- Do community members consider exclusive breastfeeding an option in HIV situations?

With these research questions in mind, the study hopes to achieve the following objectives:

### **1.3 Study Objectives**

**1.3.1 General Objective:** to have an in-depth understanding of the perceptions of communities on the dilemmas of promoting Exclusive breastfeeding in the context of HIV/AIDS.

#### **1.3.2 Specific objectives**

1. Assess the awareness, knowledge and perceptions of the risks of MTCT through breastfeeding and prevention methods among community members.
2. Investigate factors that community members perceive will affect infant feeding options.
3. To compare community perspectives on infant feeding options in MTCT implementation areas and non-MTCT areas.

### **1.4 Background Information on Zambia**

#### **1.4.1 Country Profile**

Zambia is a land locked country located in the southern part of Africa sharing borders with Democratic Republic of Congo(DRC) and Tanzania in the north; Malawi and Mozambique in the east; Zimbabwe and Botswana in the south; Namibia in the southwest and Angola in the west. Covering an area of 752,612square kilometres, the country is divided into nine provinces and 72 districts.

##### **1.4.1.1 Population and selected demographic indicators**

Zambia is a young country with a population of 10.3 million and a population growth rate of 2.9 per annum in 2000.(4) The same ZDHS reports that 20 percent of the population

is children below five years. The average population density is 13.7 persons per square metre, with Lusaka being as high as 65 persons per square metres in 2000. As well as being predominantly urban, Lusaka and the copper belt provinces are the most densely populated at about 36 percent of the total population living in urban areas. The total fertility rate is about 6.0 children per woman, while life expectancy at birth for women is 51.7 and 47.5 for men.(4) Infant mortality is still high at 95 deaths per 1,000 live births.

#### **1.4.1.2 Economy**

Zambia has a mixed economy comprising mainly of mining industry and agriculture. However the employment opportunities are limited resulting in most of the people being involved in informal self employment.

#### **1.4.1.3 Health care delivery**

The beginning of the 90s has seen some rapid health reforms in the country aimed at improving health care delivery. This has resulted in a restructured Primary Health Care (PHC) programme, where the districts have been given the responsibility to plan and manage all PHC programmes. The PHC package pays particular attention to maternal and child care, family planning, nutrition, control of communicable diseases, immunisation and environmental sanitation.

Zambia has a four tier referral system. The smallest health delivery facility is a health post, followed by the health centre, then the district hospital with tertiary facilities found at the University Teaching Hospital (UTH). Each of the 72 districts has a district hospital. The Zambian government expenditure on health as a whole amounts to about 5.5 % of the GDP. (8).

#### **1.4.2 Breastfeeding**

##### **1.4.2.1 Breastfeeding and the Baby Friendly Hospital Initiative ( BFHI)**

WHO/ UNICEF initiated the BFHI, based on the guidelines called the ten steps to successful breastfeeding. These steps focus on the hospital providing adequate support and an environment that is supportive of breastfeeding both for the mother and the infant. The concept of BFHI was introduced in the Zambian health care system in 1993, soon after the Innocenti Declaration in 1992 to promote, protect and support breastfeeding. As a result of the movement to promote, protect and support breastfeeding there has been an increase in the rates of Exclusive Breastfeeding ( EBF) by nearly one fifth in the past

decade world wide (9) In the developing world, there has been an 18% increase in EBF between 1989 and 1999, from 39% to 46% (9).

Although the rate of EBF is still low in Zambia, this practice has increased since the introduction of BFHI from 16% at two months in 1992 to 26% at 4 months in 1996 (10). The 2001-02 Zambia Demographic and Health Survey (ZDHS) reports that 40.1 % of children below the age of six months are exclusively breastfed. Since the beginning of the implementation of BFHI in Zambia in 1993, 46 facilities were declared baby friendly by 1997 and these contributed to the improvement in breastfeeding practices. Lusaka and Kitwe districts are among the towns where this concept was initially introduced. However in the past few years since there was scientific evidence that HIV could be transmitted through breastfeeding, the support for breastfeeding activities from UNICEF and WHO drastically reduced.

#### **1.4.2.2 Breastfeeding Practices in Zambia**

Although almost all women breastfeed their infants in Zambia, feeding practices are usually not optimal. Introduction of solid foods in the child's diet start early, putting the infant at risk of Acute Respiratory Infections (ARIs) and diarrhoeal diseases, leading to malnutrition. According to the 1996 ZDHS report, more than 98% of Zambian infants are breastfed during their first year of life. The same figure has been reported in the 2001-2002 survey. Prelacteal feeding (giving baby anything else other than breast milk in the first three days of life) is not widely practiced in Zambia. The practice is more prevalent in rural than in urban areas.

Although the rate of exclusive breastfeeding has increased since the introduction of BFHI, from 16% at two months in 1992 to 26% at 4 months in 1996, (10) the practice is still not optimal. The 2001-02 ZDHS (4) reports that exclusive breastfeeding has increased to 40%, although it also indicates that EBF drops sharply from 45% at 2-3 months to 15% at age 4-5 months. 62% of children age 4-5 months are receiving food supplements in addition to breast milk.

The use of feeding bottles with nipple is not common. About 3% of children ages 6-9 months are given a bottle with a nipple. Bottle feeding reaches its peak at 10-11 months with 7% of children being bottle fed.

The median duration of breastfeeding is 21 months, while that of EBF is 2 months with predominant breastfeeding being 4 months. (Predominant breastfeeding is when a child is either exclusively breastfed or receives breast milk and plain water or water based liquids without solids). EBF is also being promoted as part of the vitamin A supplementation programme. Children below six months of age are expected to get their vitamin A boost from the Colostrum in the breast milk during the first few days. 67.4% of children received a vitamin A supplement in the last six months preceding the survey. (4)

#### **1.4.2.3 Cultural beliefs and practices related to Breastfeeding**

Motherhood is something that every woman looks forward in traditional Zambia, as in most African cultures. Once a couple is married, the next thing that everyone looks forward to is the announcement of a birth of a baby soon after. If this does not happen, the elderly people would normally be concerned and try to find ways of identifying the source of the problem. A woman is blamed as the cause in most cases. So when a couple is blessed with a child a woman is naturally expected to complete her reproductive role as a mother by breastfeeding as also shown in other African settings. (11) Unless a mother breastfeeds, she will have no need for the rest and the feeding that the family members are expected to provide. Traditional rituals are normally performed before the child begins to breastfeed, but this will depend on different traditions within the country. Some traditions do express the first yellowish milk (Colostrum) from the breast as it is thought to contain some of the father's semen and so it is not given to the new born child. In other traditions 'a woman's milk is seen as her own blood and life- sustaining fluid. The same blood that feeds the foetus in the womb runs from the breasts as milk after birth so that the mother can continue to nourish the baby. (11) To promote milk production many traditional beverages are encouraged especially during the first few weeks after child's birth.

Feeding practices are normally influenced by different parties. There is more external pressure about weaning a child when it the first child. A mother would normally take advice from people around her. Different cues are used to determine that the child is ready to start eating solid foods. Constant crying of the child even after breastfeeding may mean that the child is not satisfied with the milk from the mother. Some of the growth spurts exhibited by the child such as reaching out their hands for objects or sitting may be taken to mean that the child is ready for food.

Women have the responsibility to refuse sexual intercourse with the husband before the child is weaned; a period that may extend well into the second year of a child's life. This is so because it is believed that a child gets polluted with the father's semen if they have sexual contact while the child is still breastfeeding. In situations where a woman becomes pregnant while still breastfeeding, the child is stopped from breastfeeding. However, if a child is very small, elderly women sometimes would find herbal medicines that allow the woman to continue breastfeeding at least for some time before the child is weaned.

#### **1.4.3 About MTCT programmes in Zambia**

In Zambia, PMTCT is a priority in the national AIDS plan. The country launched its prevention of PMTCT initiative in 1999, initially implemented at six pilot sites under the auspices of a national working group. (1) The main strategy used is through application of ARV drugs to HIV positive mothers during pregnancy, delivery, and postpartum care; counselling, support and provision of information on safer feeding options as provided for in the UN guidelines(6); with voluntary counselling and testing as a core part of the strategy.

Different pilot projects have taken place involving different strategies. Notable among the projects is the Ndola Demonstration project (NDP) whose objective was to integrate infant feeding and HIV counselling and testing into existing Maternal and Child Health (MCH) and community services to enable women make informed choice to feed their infants optimally in the context of high HIV prevalence. The focus of this project was optimal infant feeding and maternal dietary practices. This project was supported by the

Linkages Integrated PMTCT program. In 2002 the program began implementing in other parts of the country (12), based on lessons learned from Ndola.

Chipata health centre in Lusaka is one PMTCT project site that provided three feeding options ; no breastfeeding, exclusive breastfeeding for three months or for six months apart from providing AZT to HIV positive mothers. Infant formula was provided for mothers who opted for replacement feeding. This project was also implemented in two rural towns. At the time of the study the project had just wound up. Although VCT had continued, the provision of infant feeding formula was no longer part of the package at this centre. (personal communication with sister in charge)

The Zambia Exclusive Breastfeeding Study programme on the other hand has a focus on the effect of short exclusive breastfeeding and abrupt weaning at 4 months on the reduction of postnatal MTCT of HIV.(13) In this programme, HIV positive women are counselled on the risks of breastfeeding and the dangers of replacement feeding. The women are supported in whatever option they choose; whether to EBF and then abrupt weaning at four months or to replacement feed. Formula was provided at four months for those who chose to abruptly wean their infants. ZEBS has also started offering VCT to all pregnant women attending ANC in two health centres in Chawama and George in Lusaka.

Currently in Zambia there are 74 sites implementing PMTCT with targets to expand to all districts by end 2005 and among others to ensure that 75% of women who test positive receive short course ARV and optimal infant feeding practices counselling. (14)

### **1.5 About the study areas**

This study was conducted in two urban towns; Lusaka where there are current programmes implementing PMTCT and Kitwe, which at the time of the interviews had not yet initiated the programmes. In Lusaka, two health facilities were picked because of the different strategies that were employed in the programme. Lusaka urban district, also the capital city is located in the central part of the country. It is divided into eight zones for health care provision with large health centres in each of the zones. Ten health

centres have been upgraded and offer maternity and delivery services. This is part of the reforms aimed at improving service delivery.

With a density of 65.4 persons per square kilometre, and accounting for one fifth of the slightly over 10 million Zambians, Lusaka remains the most urbanised and densely populated district in the country and within the southern region. With this kind of dense population, water and sanitation are often a common public health problem in Lusaka and diarrhoeal diseases often account for common cause of morbidity in the study area.

The government departments and ministries remain the largest employers with very few employment opportunities in the formal sector. Most of the people are therefore involved in informal self employment, mostly trading. An estimated 70% of the population is classified as poor. Lusaka city is mostly comprised of people of different ethnic groups who have come from different parts of the country in search of employment opportunities. The official language spoken is Chinyanja.

George Health centre, one of the sites for this study, is situated on the North Western side of Lusaka city. The catchment area serviced by this health centre has a total population of about 99,248.(13) The area has partly tarred and partly gravel roads. About two thirds of the residents of George are self employed, some with trading posts; others are street or market vendors. The remaining one third comprises of either government workers or those in the private sector. Malaria, pneumonia, diarrhoea, Tuberculosis and respiratory tract infections are the reported top five diseases in the past two years in this area.(13)

George Health centre is one of the centres working with the Zambia Exclusive Breastfeeding study (ZEBS), providing a randomised trial looking at effect of short exclusive breastfeeding and abrupt weaning at 4months on the reduction of postnatal MTCT of HIV.

Chipata Health centre, the second site for the study, is located in the Northern part of the city with a catchment population of 84, 342, encompassing about 10 different townships. The socio economic status of Chipata catchment does not differ much with that of George with most of the population in informal sector and living below poverty datum line. The



main reported causes of morbidity in this area are malaria, diarrhoeal, pneumonia, anaemia, HIV/AIDs and STIs respectively.

Chipata health centre is one of the centres that recently participated in a PMTCT project that gave three feeding options; no breastfeeding, exclusive breastfeeding for three months or for six months apart from providing AZT to HIV positive mothers. Infant formula was provided for mothers who opted to replacement feed (personal communication). The centre has now started integrating PMTCT in voluntary counselling and testing of HIV/AIDS.

Kitwe District is located on the Copperbelt province and is the third largest city in the country, with a population of 401,613 (15). It is from this district that a third site for this study was picked, namely Lwangwa health centre. Kitwe is mainly mining area with 40% of the population employed by the mines. The remaining are either government workers or in the private sector. The informal sector in Kitwe as in Lusaka is also growing. Malaria, respiratory Infection non pneumonia, diarrhoea and respiratory infections pneumonia are among the top ten causes of morbidity in the district. Only half of the residents in Kitwe have access to piped water while another half uses flash toilets. 41% use pit latrines.

Luangwa Township does not differ much with that of George and Chipata in Lusaka in terms of socio economic characteristics and disease burden. Being an urban area it also has people of different ethnic backgrounds who have settled there from different parts of the country.



## **2.0 Literature Review**

### **2.1 An overview on Benefits of Breastfeeding**

For decades now, science has proved that breast milk is the best food for infants. Its benefits go beyond mere nutrition for the baby but extend to the mother as well. Nutritionally, breast milk provides in an easily digested form, all the nutrients an infant requires for at least the first six months (16). The anti infective factors that breast milk contain, especially in the first few days makes it incomparable to any other food substitute. Some studies show that even with optimal hygiene, artificially fed infants suffer five times the rate of diarrhoea infection of breastfed infants, and higher rate of ear and other infections (16). It has been shown that breastfeeding has significant protective effects at least for some age groups and that not breastfeeding carries a higher risk of death due of infectious diseases (17).

Exclusive breastfeeding has been shown to contribute to the reduction of infectious diseases such as ARIs, diarrhoea and malnutrition in infancy. Studies also suggest a strong inverse relationship with overall mortality and diarrhoea morbidity and mortality (17). A study in Brazil demonstrated that completely weaned infants had a 14.2 times the risk of death from diarrhoea and 3.6 times the risk of death from ARI than breastfed infants.

In a cohort study of 170 healthy children, the protective effect of human milk against ARI was determined (18). Lopez M et al (18) followed up children for 6 months from birth. The study found lower incidence and percentage of days ill and episodes of shorter duration. The probability of suffering an episode of ARI was higher in formulae fed than for fully breastfed infants during the first four months.

In Zambia, diarrhoea and ARI are currently among the top ten causes of infant mortality (10). Current figures for infant mortality suggest that 95 in every 1,000 live births die due to different childhood diseases (4). Consequently, the Zambian health system adopted breastfeeding as a strategy for child survival.

Exclusive breastfeeding is important also because in the first 4-6 months it helps to delay the return of fertility playing an important role in birth spacing. (6). Breastfeeding also promotes bonding between the mother and her infant. (16)

## **2.2 Breastfeeding and HIV Transmission**

Since the beginning of the HIV pandemic, approximately 3.2 million children have died of AIDS. (6,8) The UNICEF State of the World's Children report also states that at the end of 1998 an estimated 1.2 million children in the world were HIV infected (9).

According to the report on the global HIV/AIDS epidemic 2002 (3), it is estimated that 21.5%, or 590,000 adults and 150,000 children below 14 years are living with HIV in Zambia. In 2002 an estimated 800,000 children were infected. 90% of the paediatric infections occur through MTCT. This is through in utero, during delivery and through breastfeeding. Without any intervention, breast milk is estimated to account for a third of this infection.(6)

This epidemic has threatened to reverse the health gains that have been achieved in the past decade as a result of breastfeeding promotion.

Breastfeeding is associated with a significant additional risk of HIV transmission from mother to child as compared to non-breastfeeding. This risk depends on clinical factors and may vary according to pattern and duration of breastfeeding. (6) Some studies on risk of infection of HIV suggest that an infant's risk of becoming infected is highest during the first few months of life. (19, 20) The Malawi study (19) was a follow up of infants born to HIV positive women for a period of two years. The study found that most of the infection occurred in the first five months. The researchers speculate that this might be that younger mothers are likely to have mastitis and hence higher risk of transmission rates.

However, another study in Durban found that EBF lowers the risks HIV transmission by 48 percent (21). Although the two studies may appear to be in conflict, the Malawi study did not distinguish between the different types of feeding, whether mixed feeding or EBF. This therefore might account for their seemingly different findings. The Durban study is yet to be confirmed by other studies.

Risk of infection of infants ranges between 15-25% in industrialised countries and between 25-45% in developing countries (16). A randomised clinical trial in Nairobi, Kenya involving 425 sero positive mothers with their infants, found a transmission rate through breastfeeding to be 16.2% and that most of the infection occurred by 6 months (20). The study aimed at determining the frequency of breast milk transmission, to compare mortality rates and HIV-1 free survival in breastfed and formula fed infants. There was no significant difference in mortality curves in the two camps but formula feds had a higher mortality. The study found that compliance to formula feed was not fully adhered to. Only 70% of HIV positive mothers who were assigned to formula feed fully complied.

The options for breastfeeding to the HIV mothers are often formula milk, which may not always be well prepared. There is an increased risk of morbidity and mortality associated with malnutrition and with infectious diseases other than HIV. (6, 22) This calls for a lot of trade offs in providing feeding options, considering risks, costs and the benefits of breastfeeding especially in resource poor countries with inadequate sanitation, unsafe water supplies, including poor health services (22).

### **2.3 Risk Factors Affecting MTCT through Breastfeeding**

In the absence of any type of intervention the chance that an infant born to HIV-positive mother will become infected is only about one third. Of the one third of babies who are infected, two thirds are infected in the womb or at birth, one third are infected through breastfeeding. (6, 16, 23) The reasons for this have not been fully explained.

There are however, factors which have been shown to be associated with increased risk of transmission, especially through breastfeeding. Risk is increased if the mother gets the

infection during lactation, if she is already symptomatic for HIV or has a high viral load, if mother's nipples are cracked, has abscesses or other breast problems. Because viral load is said to be higher immediately after infection, practicing safe sex by way of use of condoms during sexual intercourse is recommended for breastfeeding mothers to avoid infection. (24) Some studies also indicate that prolonged breastfeeding could be a factor for increased transmission risk, (20) while others suggest the different feeding practices; that is exclusive breastfeeding and mixed feeding. (21, 25)

#### **2.4 UNGuidelines on infant feeding**

UNAIDS/WHO/UNICEF (6, 16) have issued guidelines on infant feeding for women who are HIV negative or who do not know their status, and for those who are HIV positive.

For women who are HIV negative or who do not know their status, breastfeeding should be the norm and EBF the choice. For women who are HIV positive, informed choice should be given either to breastfeed or replacement feeding after counselling on the risks of transmission and benefits of EBF. Replacement feeding may be with infant formula or modified animal milks. Heat-treated expressed breast milk and wet nursing are other additional alternatives. Current recommendations (6) suggest avoidance of all breastfeeding by HIV infected mothers when replacement feeding is acceptable, feasible, sustainable and safe; otherwise, exclusive breastfeeding is recommended during the first months of life.

The infant feeding policy also recommends that to minimise the risk of infection, breastfeeding should be discontinued as soon as feasible, taking into account local situation and the risk of replacement feeding, including infections other than HIV and malnutrition.

With all this information available regarding infant feeding options, many HIV positive mothers are facing dilemmas in their infant feeding choices. The dilemmas stem from several factors such as; breastfeeding is a norm in most African communities, while it is seen as life saving for a new born, there is evidence that HIV can be transmitted through breastfeeding, meaning that it could also be life threatening. There are also concerns

about the possibility of the loss of confidence in breastfeeding spreading to all women and creating a ‘spill over effect’ of this information to the rest of the population (6, 16, 22, 26). A study in Tanzania (27) on the counsellors’ perspectives on the infant feeding options available to HIV positive mothers also alludes to the possibility that women might lose confidence in breastfeeding and revert to the use of infant formula.

## **2.5 Breastfeeding practices**

Many studies are now attempting to describe infant feeding practice among women in the context of HIV/AIDS.

De Paoli et al (28), found that in Tanzania women’s knowledge on HIV transmission was not matched with feeding practice. This study was done among women whose HIV status was not known to the researchers. The study was cross sectional designed to describe breastfeeding practices, what pregnant women knew about breastfeeding and mother to child transmission of HIV and to explore factors that associated with exclusive breastfeeding, especially the presence of HIV/AIDS. This study was supplemented with focus group discussions with pregnant women. This study used only pregnant women to describe breastfeeding practices. Recall bias might have been introduced in this study.

An evaluation of the Programme to prevent mother- to- child- transmission of HIV in Botswana suggested that there might be spill over effect of the PMTCT pilot project (26). The programme looked at infant feeding practices among HIV infected mothers and the uninfected women at MTCT sites and among women of unknown status where the programme had not yet been implemented. This was in a cross sectional quantitative and qualitative study of determinants of infant feeding practices and mothers’ perceptions of the utilization of the MTCT programme. The study found that children between 0-6 months in the intervention sites were more likely to receive fluids, while for those in the age group 7-12 months, more were offered family food and commercial foods in addition to home made porridge. 32 percent of the uninfected mothers in intervention sites gave formula as a supplementary feed compared with only 6 percent of unknown status in the non-intervention sites. The study did not go into depth to understand the possible reasons for this kind of variation in feeding practices in the various groups. The researchers suggest further study in this area.

A study in South Africa by Chopra et al (29) on the impact of the MTCT programme on infant care practices among programme participants and the local population found that while most of them knew that HIV could be transmitted through breastfeeding, over 90% said this did not affect their feeding decisions. Using a structured questionnaire and in-depth interviews, seventy caregivers of young children were randomly selected from clinics participating in the MTCT programme and interviewed. Unlike the previous cited study, this study alluded that the spill over effect of the PMTCT was not imminent in their study.

In Zimbabwe, a recent study found that HIV positive women who did not know their status were significantly more likely to have initiated mixed feeding earlier than women of known HIV positive status or those who were negative. (30) This was in a study to determine whether knowledge of HIV seropositivity influences infant feeding behaviour. The authors speculate that because the HIV infected women who did not know their status also reported increased symptoms, their ill health status may have influenced feeding practices, resulting in a tendency to feed less breast milk, and introduce supplementary food. They further report that the feeding practices observed in these women may be an attempt to conserve limited maternal resources.

## **2.6 Knowledge and perceptions on BF and HIV**

A formative research to obtain information and data that could be used to improve the effectiveness and acceptability of messages and services for MTCT prevention on the community level was done in Zambia and Botswana (31). The study specifically examined what the women knew about MTCT of HIV and whether they saw this as a problem, as well as the factors that determine their participation in voluntary counselling and Testing. The study found that in Botswana, many people defined it as invisible since most of them lacked personal experience with it, while in Zambia HIV was defined as an overwhelming problem. While their counterparts in Botswana revealed a wide range of knowledge and understanding about HIV transmission and MTCT, those in Zambia were well informed about HIV/AIDS but not exposed to issues surrounding MTCT. In this study, the strength of cultural norms and pressure to breastfeed was reflected in the



derogatory references to women who do not breastfeed. This is consistent with Bassett's (32) review of different studies that show that the community would meet a woman not breastfeeding with disapproval.

A similar study was done in 1999 (33) in a rural district in Zambia to assess and document the perspectives of women and their communities about mother to child transmission of HIV, VCT, treatment and breastfeeding options and to identify community groups involved in support work and decision-making in order that a more responsive MTCT implementation strategy may be designed. In this study, participants perceived the problem of HIV as huge and that many of them feared that they had HIV based on the community perspectives that many people in this community are HIV positive, and on their own sexual history. People preferred to be in 'this limbo' where they think they know their HIV status without really knowing. This kind of state was preferred because according to them being HIV positive could have tragic consequences. A Ndola study (34) found high levels of knowledge on MTCT transmission of HIV but reported that there were misconceptions about the mode of transmission. The 'blood present in the milk' was seen as a source of infection for the child. Some respondents felt that the decision to breastfeed would depend on status of baby at birth; it was however not clear how they would determine the HIV status. Participants further expressed that non breastfeeding would be stigmatised.

The last three studies cited above were formative studies. It is therefore imperative that we assess the community perspectives after being exposed to the intervention of PMTCT of HIV.

In a related study, Pool et al (35) looked at breastfeeding practices and attitudes relevant to vertical transmission of HIV in rural South West Uganda and found that most women were not aware that HIV could be passed to the child through breastfeeding, except through sexual intercourse and blood. They were aware that the virus could be passed through delivery because of the blood contact.

Gill Seidel and co authors (36) examining the experiences of breastfeeding and vulnerability among a group of HIV positive women in Durban found that the study

participants did not have sufficient information on which to base their infant feeding decisions. Few had information about the risk of transmission of HIV through breastfeeding. The study involved in-depth discussions, which were repeated to confirm and substantiate some of the critical emerging issues. This was a micro study involving only 13 HIV positive mothers from a peer support group. However, it gives us some insights into the perspectives of HIV positive mothers regarding decisions on breastfeeding if HIV positive. The study also revealed some misconceptions about being HIV and breastfeeding.

Omari et al (37) looked at feeding practices of women whose HIV status was known and should have received counselling and compared with those of uninfected mothers. Results suggest that feeding practices of the HIV infected differed significantly from HIV uninfected mothers.

From the literature so far cited, it is clear that more research is still required to understand how the community, especially those whose HIV status is not known or those who are negative views promoting breastfeeding. This is considering that in the recent past breastfeeding has been promoted and now with the dilemmas posed by mother to child transmission of HIV. The importance of finding out how the threat of HIV infection is impacting on the rest of the population cannot be overemphasised.

### **3.0 Methodology**

#### **3.1 Study Design and Rationale**

This study was exploratory, employing qualitative methods. The rationale for the choice of this particular design was because the researcher felt that issues such as perceptions, feelings and opinions on infant feeding options and the dilemma posed by the HIV pandemic are best articulated through in-depth discussions using qualitative methods. In-depth individual interviews and some focus group discussions were held amongst the members of the support groups, pregnant women and with mothers with children less than one year old and fathers.

#### **3.2 Study Population**

The study population included pregnant women, mothers with children six months and below including fathers. These participants were either of unknown HIV status or negative. Fathers formed part of the interview group because of their potential role in influencing infant feeding options as breadwinners in the homes. Members of the breastfeeding support groups, nutrition and child health promoters were also included to serve as key informants because of their experience in child health and breastfeeding promotion in the community. Although the information from the key informant was not analysed, due to time limitations, it served as an informal background during analysis. The mothers and pregnant women selected are those in the age group of 25-34 years. These participants had to meet the other selection criteria.

#### **3.3 Selection of Study Area**

The selected districts are Lusaka and Kitwe. Lusaka is one of the districts where PMTCT programme is being implemented. Kitwe is none PMTCT implementation site but is included to compare perspectives with Lusaka. These are both large urban areas and hence might have similar characteristics of the study population. Lusaka, the capital of Zambia has a population of about 1,800,000. Kitwe is the third largest city in the country. It is about 367Km North of Lusaka. In terms of HIV prevalence, Lusaka and Copperbelt provinces are among the provinces with rates higher than the national average at 25% and 22.1% respectively (4). The current national prevalence is 16%. Lusaka is one of the sentinel surveillance sites for HIV. According to the surveillance data for

2000, the level of infection among pregnant women increased from 8 percent in 1985 to 32 percent in 1999. The highest increase was seen in the period 1998 to 1999.(38) According to this data the peak age group for infection among pregnant women was 25-29 years in 1998. The ZDHS 2001 puts the peak group at 30-34 years.

### **3.4 Sample selection**

Sampling was purposive. In order to get a broad range of information and perspectives on the subject of study, maximum variation sampling was used (39). Pregnant and lactating women, fathers, and support group members were interviewed. For each category of interviewees, the first five who met the selection criteria was selected but varying in parity, age and area of residence.

Based on the proposal sent to the Lusaka District health office, George health centre which had a programme to prevent MTCT of HIV, under the auspices of a project called Zambia Exclusive Breastfeeding (ZEBS) was selected to participate.

With the help of the Kitwe District Health office, Luangwa Health Centre was selected in Kitwe district as its population was similar to George clinic in Lusaka in terms of the social economic characteristics. The different categories of people that were included in Lusaka were also included in Kitwe.

A total of 130 people were talked to through 50 individual interviews and 80 in ten different focus group discussions. Five in- depth interviews with each of the category of participants was conducted at each of the selected facilities in George and Luangwa clinics.

Chipata health centre was included as a third site while in the field for the following reasons: recruitment of women participants in George was a bit problematic due to suspicions among the community that the breastfeeding project in George was Satanist. It appeared the fear was that if they went for testing, the blood would instead be used for satanic worship and hence create problems for the ones whose blood was used. Since my project was also on breastfeeding, some thought I was part of the team at the clinic. As a result of this I was forced to move to the other site to determine how widespread this rumour was. Secondly, I realised that within Lusaka, Chipata health centre had a slight different approach to its implementation of the prevention programme ( see introduction

1.4.2 ) Only pregnant and lactating women were talked to in Chipata health centre in Lusaka as the idea was only to see whether there would be any new insights from what I already got from George.

The purpose of this selection was to see whether there are differences in terms of the perceptions on issues related to MTCT of HIV through breastfeeding and how issues of infant feeding are currently perceived among the different groups.

Table 1: Summary of Sample selection of Community members

District	No. of Facilities	No of Participants					Total	
		Pregnant women		Lactating women		Men support grp		
		FGDs	Interviews	FGDs	Interviews	Interviews	FGDs	Interviews
Lusaka	2	2	10	2	10	5 5	6	30
Kitwe	1	1	5	1	5	5 5	4	20
<b>Total</b>	<b>3</b>	<b>3</b>	<b>15</b>	<b>3</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>50</b>

### **Selection criteria for study participants.**

**3.5.1 Inclusion:** Mothers with Children who are breastfeeding, and were under 12 months.

Mother or pregnant woman should either not know her HIV sero status or be negative. Pregnant women should have had own previous breastfeeding experience. Fathers should have a breastfeeding child of less than 12 months at home. Selecting parents with children less than one year was meant to allow for parents to reflect on current feeding practices since most children in Zambia are still breastfeeding by this age. Key informants talked to were those who had been in a support group for at least 3 years before study. This was meant to allow for better reflection on their previous and current promotion and support activities.

FGDs- Participants to the focus group discussions included mothers between 25-34 years. This was hopefully meant to minimise the age difference and therefore increase freedom

to discuss issues. All of them also had some breastfeeding experiences. The participants were screened for the level of education and included only those with maximum 12 years schooling.

**3.5.2 Exclusion:** Prime gravida Mothers were excluded since they did not have previous breastfeeding experience. Women with a known HIV positive status were not included.

### **3.6 Data collection**

Data was collected from the month of September through to November. During this period a total of 130 people were talked to through individual interviews and focus group discussions, using the question guide in the appendix. The guides were field tested in George Clinic catchment area in Lusaka among five breastfeeding mothers for in depth interviews and six in the focus group meeting the selection criteria. The guides were tested to assess participant reaction to the guides, in terms of the length of discussions, sequence and logic of questions, including the relevance of questions. It was accordingly modified. Due to the suspicions encountered during the pre-test in the community, the discussions during the actual data collections were held at the clinic premises and not in the compound as initially planned.

In Lusaka the local language Chinyanja, was used during discussions but being a large city, language switch is very common and hence English and Bemba were often also used interchangeably depending on subject preference. In Kitwe, Bemba was mainly used.

### **3.7 Field organisation ( The setting)**

Female field assistants facilitated identification of study participants from well child and ANCs. The assistants also helped with arranging for the venues for interviews. I was introduced together with the field assistants by the nurse in charge before the recruitment exercise so that mothers were made aware of the possibility of being requested to participate. In George and Luangwa clinics, the well child clinics were held outside the clinic in the different zonal outreach areas and it was from these that the mothers were identified and requested to participate. The male assistant was also recruited to facilitate identification of fathers with young children in the community.

Appointments were made with participants who qualified and gave consent to be interviewed. The interviews lasted between 38 minutes and one hour. An office within the clinic premises was provided for the interviews. Of the 50 interviews 38 of them were recorded with permission. On one occasion the recorder failed while on the other the participant felt uncomfortable to be recorded. The remaining 10 from Chipata health centre were deliberately not recorded because I conducted the interviews only to verify some information already obtained in the previous Lusaka interviews. These interviews were immediately transcribed and agreed upon with the note taker and myself. All the interviews were transcribed in English. The note taker took down all the notes while I concentrated on moderating the interviews and closely tried to follow and guide the discussions.

All the groups had between 6-8 people and lasted an average of one hour and 45 minutes of discussion. Eight of the ten were also recorded. The recorder failed on the other two and hence had to be only hand written. All the discussions were transcribed in English. Efforts were made to make the groups as homogenous as possible in terms of age, education background and social-economic status. This consideration was important for this study as it has been found that it is easier for participants sharing similar key characteristics to identify with each others' experience and therefore helps to produce information in greater depth. (40)

The members to the focus group discussion consisted of women ranging mainly between 25-34 years who were breastfeeding children less than one year at the time. In the case of the pregnant mothers, all had previous breastfeeding experience of at least a child in the previous five years. These were recruited from the different zonal areas in order to increase the reach of participants. In some situations in Lusaka's George health centre, recruitment of women was a bit problematic due to some suspicions existing at the time about the on going PMTCT project in the area. This meant that I had to make decisions to recruit some women who did not fit into the age category as earlier planned; as long as they either had a small child less than one year and or had previous breastfeeding experience.

### **3.8 Individual Interviews and Focus group Discussions as data collection tools**

Individual interviews and focus group discussions are some of the main tools used in qualitative research where the researcher wants to find people's in-depth meaning and experiences behind certain phenomenon or to describe and understand the complexity of a phenomenon.(41)

#### **3.8.1 Interviews**

Interviews also allow for meanings to explore in-depth, allowing for the examination of thought, feeling and action and can be a way of exploring relationship between different aspects of a situation.(42) They are a powerful method for capturing the experiences and lived meanings of subjects' everyday world. As observed by Kvale (42), however, the interview situation can also be quite stressful to both the interviewer and the interviewee. The interviewee often has to reflect on whether or not to share personal information and to what extent. While this might restrict the kind of information that the interviewer can get, it is also possible that the interaction with the researcher might increase the depth of the information gathered. My previous exposure to and experience with in-depth interview skills made it easier for me to make the necessary probes where necessary or reassurances about the confidentiality of the information they gave out. The reassurances were important for me to try and gain the confidence and trust for the participants to speak. The participants in this study had given verbal consent to participate after explaining what issues would be discussed hence they had the possibility to discontinue the interview.(See appendix I)

Since interview situations may also have implications with regard to violating people's right to privacy, the position of researcher in the interviews might also influence the kind of information collected. I was aware of these power relations throughout the interview process and therefore tried to remind the participants that their views were important to this research. The reassurances were important so that my presence did not strongly influence the respondent to feel obliged to give responses that are morally and socially sanctioned, but not reflecting their own feelings, attitudes or practices. I believe I tried to



achieve this confidence because most of the respondents could mention what they had heard during the health education talks but despite that gave their own different opinions.

### **3.8.2 Focus group discussions**

Focus group discussions were originally used in marketing research. In social science focus groups have been used both as a means of data collection or as supplement to both quantitative and qualitative methods. The hallmark of focus groups is the explicit use of the group interaction to produce data and insights that would be less accessible without the interaction found in a group (43). The kind of insights produced in a focus group may not easily be found in the in-depth interviews and observations. Compared to individual interviews, the focus group has the ability to observe group interaction. They provide an opportunity for participants to challenge each other on a topic. This is a comparative advantage over the in-depth individual interviews.

In focus groups the reporting of perspectives provides not only insights but leads us into the thought process that produce the statements of opinions(43) This way we are able to have a glimpse of the basic values behind the group perspectives; in my case on the infant feeding practices and attitudes in the context of HIV/AIDS. It should be emphasized however that what we get in the discussions, as in the interviews, is only what participants say they do or believe. It does not necessarily bring out the practice or what they actually do. Research has actually shown that people do not always practice that which they say they do. In this study no breastfeeding practices were observed to verify the practices. However, this research has managed to show opinions about what people say they do.

Generally, data generated in focus groups can be chaotic and may not be as easy to manage as in individual interviews. Moreover, the researcher has less control over the data collected. It is easier to pursue new leads or skip unwanted material in a one in one interaction than in a focus group. However my ability to be articulate with group dynamics as a moderator helped to have some balance between having a free flow of information and limiting unwanted data.

Looking at the nature of the two techniques, the in-depth interviews and the focus groups, it is important therefore to cross validate by applying the two methods to the same topic(43) The use of a study design that combines different techniques to explore one set of research question (s) may also be referred to as triangulation (41). Triangulation may function to confirm or make information more complete. In this study the two methods were used in order to achieve both purposes of triangulation, that is, completeness and confirmation. The data was triangulated both at individual level through the interviews and collectively through the focus groups. Hopefully this contributed to increasing the quality of the data generated from the field. The focus groups were conducted as a follow up to the in-depth interviews.

### **3.9 Interview and Focus Group Discussions process**

The group discussions were held after the individual interviews for each category of the participants. They were used to confirm some information collected from the individual interviews and to help form the community perspectives on the different issues raised.

The discussions mostly opened with the researcher thanking participants for making time to come to the discussion. We introduced each other and agreed on how we would refer to each other during the discussion. Participants were informed of the purpose of the meeting and tried to make them realise that the information they provided was important also represented the views of other mothers who could not be invited to the discussion. The participants were encouraged to be very free and give their honest opinions about the issues that would be discussed.

They were also informed that there were no wrong or right answers and that they should therefore be open enough to share their own feelings and experiences about breastfeeding. As part of the preliminaries, participants were also encouraged to spontaneously feel free to contribute to an idea either to agree or disagree with their friend's point of view, based on their own opinions and why they felt so. The idea was to have a fruitful dialogue.

After all the preliminaries of making the participants settled and comfortable, the actual discussion began by inviting them to describe their breastfeeding experience either with the current or the previous child, to also describe whether there were any differences in the current feeding practices with what they had previously experienced. Normally, one person would open and the rest would also chip in. Opening with such general information was not only used as an ice breaker for the participants to warm and open up, but gave the researcher the opportunity also to note some of the attitudes and practices that were later picked up during discussion when it came to a more sensitive issue of breastfeeding and HIV.

Participation in most cases was high and sometimes the participants confessed on some issues that they were not sure of the 'correct answers' but mentioned what they thought. At that point I re assured them that their perceptions were also important.

Consequently, on some occasions some participants in the groups had to be prompted to share their feelings and comment on what had been expressed. Probing was also done in situations when I noticed something through some non verbal cues and tried to verify what that meant. For instance there were times when someone made a comment and the whole group burst out laughing, or when someone was nodding or shaking their head while another was speaking. There were also times when a question was paused and there was a long moment of silence from the group. For me I tried to reflect on why that was so and asked the group. I tried to find out whether the question was not clear or it was something else. This was important for me to come up with overall impressions.

There were occasions when I noticed some few outspoken members who wanted to contribute on every point. I become cautious and diplomatically invited others to first make their comments or simply avoided eye contact with such members when a question was paused or a clarification was sought. This was important for me to avoid single opinions dominating the discussions.

Once a particular theme was exhausted according to the checklist, the researcher once again came in to summarise the main points raised on that issue and asked the

respondents whether they agreed with that summary of points or whether there were other opinions which I missed. At other times I invited one of the participants to make a summary and then ask the colleagues if they agreed. This process went on through out the discussion. Through this process I tried to encourage everyone to share their views and balance the discussion.

### **3.10 Data Handling**

All the recorded tapes were properly numbered according to area of interview, category of respondent and respondent number and site. The investigator moderated all the discussions. Hopefully, this should assist in reducing on biases or variations in the information collected.

One field assistant was hired to make notes in all the interviews, both the recorded and un recorded. The same assistant transcribed all the interviews together with the researcher. Key statements were recorded verbatim. At the end of each day, the researcher reviewed the day with the note taker by trying to reflect and get the impressions on the data collected. Unrecorded interviews were forthwith transcribed within two days by the note taker together with the researcher so that if there were clarifications on certain points, these were discussed and agreements made.

The transcribed transcripts were passed on for typing to the typists. Were possible I also typed some of the scripts. I checked the typed transcripts against the original written scripts. Three separate folders were created to store information from the three different sites during data collection. Separate folders were also created during analysis stage were transcripts from data entry were copied to the new folders to begin the process of data reduction.

### **3. 11 My Role as a Researcher**

The researcher happens to be working in the nutrition education and communication unit of an institution that has the mandate to Guide policy on issues of food and nutrition. This is at national level. Promoting, protecting and supporting Breastfeeding or infant and young child feeding is one programme that this institution has been dealing with.

Dealing with nutrition education means that I have been actively involved with breastfeeding promotion since the inception of the breastfeeding promotion programme in the country in 1993. This partly explains my interest in trying to find out how the community views issues of breastfeeding now that we know that there is a possibility to transmit the HIV virus through this route.

My institution being a research organisation, I have in the past had the opportunity to go down to the community level to conduct some group discussions and interviews with caretakers on several issues pertaining to food and nutrition, including breastfeeding.

With my background of being a breastfeeding activist who has not only preached exclusive breastfeeding but also practiced it with two of my children, I tried to relate with the mothers and fathers as they shared their own experiences, being open enough to opinions against my own experiences and the scientific information I have about breastfeeding and HIV.

### **3.12 Reliability and Validity**

Reliability is about trying to reduce interviewer bias so that we can trust that the findings are not biased. Morse (44) describes reliability as the measure of the extent to which random variation may have influenced stability and consistency of the results. The same guideline was used in all the interviews and the focus groups, with some probes where necessary. I moderated and transcribed all the focus group discussions, hoping that this should help in maintaining consistence of discussions and hence the accuracy of interpretive analysis. In this study I used one person as a note taker. The assistant also transcribed all the individual interviews from the recorder. As far as possible these interviews were transcribed verbatim so that not much of interviewee perspective was lost.

One of the ways to increase reliability in FGDs is to have different researchers doing independent analysis and comparing results. This was not possible in this study as there was only one researcher. However, comparing statements within and across sessions also helped in assessing reliability.

An assistant helped in capturing and recording the emotions, tone and non-verbal atmosphere of the group discussions. This was important in making overall interpretations of discussions. The main summaries of the discussions were verified with the groups before winding up discussions. After the meetings, the assistant and the researcher met and summarised the impressions of the meeting. This was meant to be part of the quality control of the data. The review meetings also assisted in assessing the areas of focus for the next interviews or discussion.

Validity may refer to the extent to which the research findings represent reality and the ability to verify the data. (44) Although the interviews were all held from the clinic premises, I do not feel this may have negatively affected the responses I was getting from the participants because they felt free enough to differ with some of the information they get from the clinic. For instance, some of them mentioned that they did not practice exclusive breastfeeding even though that is what they are advised at the clinic, because they did not believe it was a practical thing.

Combining both FGDs group discussions and individual interviews helped to enhance the validity of the research findings. The individual interviews provided knowledge more at the individual level. Focus group discussions were held after in depth interviews in that this methodology has a degree of external validity based on the fact that the FGDs are grounded in the tendency to discuss issues and ideas in groups. Given that FGDs are social events involving the interaction of participants and the interplay and modification of ideas, such a forum for opinion gathering render data that are more ecologically valid than methods that assess individuals opinions.(45)

Group dynamics and the communication process are important as these affect internal validity of the focus groups (45), therefore my role as researcher was important. Having prior experience with conducting FGDs, having worked with the breastfeeding team for many years and having also received some prior training on MTCT gave me an edge in handling the group discussion and making the necessary probes. i.e being able to deal with issues of compliance, identification, and internalisation of opinions(45) that is reporting opinions that are deeply ingrained and personal. The use of both the in-depth interviews and FGDs, coupled with constant probes helped me achieve what Kvale (42)

says to validate is to question, in particular to continually ask what is being investigated and why.

### **3.13 Analysis**

After the interviews and discusses were done, they were transcribed, typed and checked for errors against the original transcribed copies. Three scripts were selected and read several times to try and help develop the different categories for data reduction and analysis. These were initially coded using NUDIST software package, line by line using mainly tree nodes. Free nodes were created where some ideas seem to stand alone. The categories were also created guided by the research questions. I was also inspired by Fredrik Barth's generative model on options or possibilities and constraints for people's choices (46). Against these start up categories, the rest of the scripts were coded. Only 39 of the 50 interviews and 7 of the 10 focus groups were analysed. The interviews from the key informants and those of the men in Kitwe were left out due to time limitations for the analysis.

After the initial categories were developed, some categories were collapsed and merged as the analysis progressed. Summaries of the impressions/data collected from the different groups of participants; pregnant women, mothers and the fathers were separately made for each of the categories from the three sites and compared between the groups. Content analyses of these were made to interpret the data.

For focus groups, the same categories as for the individual were used to code the transcripts. Segments of similar text were identified and put together for subsequent reading, analysis or interpretation. Interpretation of the results was facilitated by the fact that statements could be examined within the context of the broader discussion and in light of the information available from other sources.(40) In this case the in-depth interviews were my other source.

Finally, summaries from both the in-depth interviews and the focus groups were critically analysed for each of the groups and then merged together, looking for any striking

differences or similarities. Although information in focus groups is discussed more at a general level, participants do share their personal experiences to support their opinions. Such kind of information is useful as it helps ground the discussion in reality and can serve as referent when asking about what is common or typical. (40) During analysis therefore, quotations from individual participants have been used to illustrate some points.

### **3.14 Methodological Considerations**

Results of this study should be interpreted bearing in mind the following methodological considerations:

Contact with the respondents was made only once. This means that it was not possible to go back for verification of certain information which I may otherwise have liked to probe further to enrich the information collected. However, the information from the FGDs helped to clarify some of the issues raised in the individual interviews.

Recruitment of the participants in the first site in George clinic was met with difficulties because of the rumours circulating at the time in the community about Satanism. Most of the people identified as having links with the clinic were looked at with a lot of caution and suspicion. It is not clear how this may have affected the quality of the information collected.

No observations were made, nor any 24 hr recall done to assess the actual feeding practices. Women only described their experiences and what they said they were doing. The waiting time for the group discussions may have affected the information in that those that came early for the discussions were getting impatient and in a few occasions left before the end of the discussion due to time.

This study was meant to solicit for views of people whose HIV status is not known or those that are sero negative. However, since the study did not screen for HIV status but based on self reported status, it is possible that some of the respondents could have been HIV positive and may have been counselled on infant feeding options and hence may have influenced the answers to the different issues that were raised in the discussion .



This study was undertaken in urban high density areas where the water and sanitation are still big problems; food insecurity abound and income levels are low. Perhaps the perspectives could be different if undertaken in more affluent areas. However, such communities as where this study was undertaken are the major concern of public health practitioners and policy makers regarding the possibilities of losing confidence in Breastfeeding. It is within this group that the use of BMS has the most negative impact.

The design of the study and sampling of the respondents, including the small numbers used make it difficult to generalise the findings of this study to other areas.

Data was analysed by one person who also happens to be in the Programme to promote, protect and support breastfeeding. Sometimes it is difficult to bring oneself apart from the data and this may have some influence in the way the data is analysed and presented.

### **3.15 Ethical considerations**

The research proposal was cleared with both the Norwegian and the Zambian Research Ethics committees. The District Health offices responsible for the facilities where the study was done also gave consent for the study to be conducted.

The purpose of the study was explained to the participants and verbal consent given for the interviews as against written consent due to the fact that most participants were very cynical about the idea of signing. Permission to record the interviews and the focus group discussions were sought with the participants.

The issue of confidentiality was kept throughout the process of the research. All the data collected could not link a particular respondent to it. The respondents were instead only given respondent numbers.

## **4.0 Data Presentation**

Analysis of this work is done in such a way as to try and understand some of the factors that may compel women to exclusively breastfeed or to avoid exclusive breastfeeding, particularly in an era of HIV/AIDS. This chapter is presented in two parts; the first part looks at those factors that may both enhance and negatively affect the practice of breastfeeding, which shall be referred to as options and constraints for breastfeeding. The second part looks at the participants' perceived risk of acquiring HIV and that of infecting their children. Furthermore, it looks at how participants' current knowledge of HIV transmission through breastfeeding and their perceived risk of infection may affect the practice of breastfeeding during the time of HIV/AIDS. Analyses from all the three sites have been integrated. Specific mention to a particular site is made where necessary during data presentation.

### **4.1 Demographic characteristics of participants**

This work is based upon analysis of 39 individual interviews and seven focus group discussions. As mentioned in the methodology, the remaining interviews particularly from the key informants could not be analysed due to time limitations. The age range of the women was between 22 and 39 years old. For breastfeeding mothers they all had a child breastfeeding who was less than one year at the time of the interview. The age of the children ranged between 2 months and 9 months. In the case of the pregnant women each of them had at least some previous breastfeeding experience. For both pregnant and breastfeeding women parity ranged between 2-6 children. The educational level for these women ranged from the fourth grade to the ninth grade. However, there were two women who had gone up to the 10<sup>th</sup> grade and another who went up to grade 12. The marital status information was not collected. Almost all of these women were not in formal employment. Most of them reported either being fulltime housewives, with some running small stall markets at their homes. There were three who worked as hair dressers in saloons. One worked as a cleaner at the clinic while another worked as a cashier at a private firm. As for the fathers, the age range was more varied ranging from 27-45 years.

Of the 13 men in both the individual interviews and focus group, most of them were in the informal sector doing small scale businesses. One was a teacher at a private school; one was a security guard at the clinic. Three of them reported not doing anything as they had been retrenched from their jobs as driver and mechanic. In terms of education background, most of them had gone as far as the 10<sup>th</sup> grade. Three of them reported having gone only as far as the 7<sup>th</sup> grade, while two of them were grade 12. All of them had wives who were breastfeeding a child between two months and 10 months at the time of interview. Number of children also ranged between 2- 7 children.

**Case study of a 32 year pregnant mother in Lusaka.**

Misozi (not real name) has 3 children and gone as far as the 12th grade in school. She is a cleaner at the clinic. This case study is aimed at illuminating the perceptions that people may have on breastfeeding and HIV, some of the ambivalences that may exist and at the same time show that the issue of breastfeeding and HIV may also bring about some fatalistic attitudes, where they have reached a level of helplessness due to resistance to change their behaviour. This is how she feels about different interview items on the subject:

*I think our friends who exclusively breast feed up to 6 months rarely bring their children to the clinic because of diarrhoea problems. Their children look healthy because of breast milk. Children that are weaned early don't look nice and healthy. They say that if child is born without the virus then it has to be breastfed for 4 months, and can not get infected during the 4 months, but I feel the child would still get infected.*

*If I found that am infected I would still breastfeed since 'am already pregnant and since that is the baby's food and I can not start giving the baby other milk when it is just born because it is different from breast milk since children don't get diarrhoea if they are exclusively breastfed. It is not easy for women to stop breastfeeding their children because the first instinct is to breastfeed. All my children have been growing properly and I have never had an STD before so I don't feel at risk. Even if I suspected I would breastfeed because of my husband if would ask me why I am not breastfeeding and if I*

*tell him that would cause problems in the home. He would accuse me of infecting him as well. I think the risk is higher on exclusive breastfeeding mixed feeding because 'the food can help the other one especially if the mother does not get eat enough food'.*

*About breastfeeding promotion should just continue to reduce diarrhoea cases among children. Even those that are positive should continue 'but only for 4 months because they say that after that the child has higher chances of getting infected'. There are few people who can allow their wives not to breastfeed. Sometimes people even say that they are just lying to you they are just Satanists. About condoms as a prevention measure I don't know much about that but I think they can help for family planning. People refuse using condoms saying that if it means dying we will just die, does it mean those people who have died did not want life?*

Misozi's perceptions present a lot of issues relating to the knowledge on transmission, the perceptions about transmission, and the dilemmas that women may have to face. As we read through the text we see that she is typical of the views being expressed out there by many women, and men.

## **4.2 Factors Affecting Breastfeeding**

Several factors were described by the informants that may positively or negatively influence the practice of exclusive breastfeeding. These factors have been categorised as, knowledge on the perceived benefits of EBF, knowledge on risk factors and prevention of transmission through breastfeeding, attitudes and beliefs on breastfeeding, attitudes and perceptions on breastfeeding and HIV, cost of formula and food insecurity/poverty, attitudes towards non breastfeeding women, maternal instincts and support and personal experience.

### **4.2.1 Knowledge and attitudes on perceived benefits of exclusive breastfeeding**

Informants were asked to describe their current or the past breastfeeding experiences in order to determine their knowledge and attitudes about exclusive breastfeeding.

Most of the mothers expressed the need for exclusive breastfeeding for at least 4 months. Main reasons include that child has less diarrhoea and look healthier than those children

who start solids early. Some felt that at 4 months some children start teething, hence the need for solid foods. Almost everyone mentioned the nutritional value of breast milk to the child as a reason for their desire to exclusively breastfeed.

Apart from the nutritional value of breast milk, some mothers also mentioned that they had some personal positive experiences with their previous child regarding exclusive breastfeeding or experienced some negative effects of early introduction of solids before six months. A mother from George clinic amplifies the point as she describes her own experience with exclusive breastfeeding:

*...Breastfed babies are healthier than those that are given artificial milk. When you are just breastfeeding the child's scale (child's weight)... increases every month but immediately you introduce to other foods problems start e.g. when I started giving my child porridge that's when I experienced the problem of diarrhoea and scale dropped By Breastfeeding you prevent baby from getting sick often. Breast milk is the best because no dirty in the milk, has the right temperature unlike the artificial milk. (breastfeeding mum)*

In some instances mothers exclusively breastfeed because 'the milk in my breast was sufficient and child did not give me any problems', or because 'artificial milk is expensive'

Men's views on the benefits of EBF were not very different from those of the women and most of them reported having had experience with their own children as this man reports:

*..... The only thing I do appreciate is the fact that with this one, we are not experiencing a lot of those diarrhoea problems like the first one had a lot of problems with coughing, she used to cough a lot. (father)*

Similar information was obtained from the focus group. It is important to note that most of the participants described their own experiences either with exclusive breastfeeding or early introduction of solids with their own children or as observed from their neighbour's child. From the discussions with both mothers and fathers on exclusive breastfeeding, it

is apparent that the promotional messages on exclusive breastfeeding are taking root because people have seemingly tried it and it has worked for them.

#### **4.2.2 Knowledge on risk factors, Attitudes and perceptions on transmission of HIV**

To assess the knowledge on MTCT and breastfeeding questions were asked as to whether they know of which ways that a child might get infected with the virus, whether it was automatic that a child could get infected through breastfeeding and if there are ways that increase the risk of infection through breastfeeding, including some ways that they thought could help reduce the risk of infection if an infected mother decides to breastfeed.

##### **4.2.2.1 Knowledge of Risk factors**

Almost all the women mentioned that it was possible for a child to get the virus through breastfeeding. However most of them in Lusaka also felt that it was not automatic that if a child breastfed then it would get the virus. Some risk factors mentioned were; blood contact if mother had sores on the breast and child also had sores, early introduction of solid foods, if mother is sickly, or 'depends on the viral load of the mother' according to the women focus group in George health centre. It is not clear however, how they determine the viral load if not tested. This finding is similar to that found in a study in Nairobi, Kenya where women who reported some symptoms suggestive of advanced HIV disease progression or had higher viral load tended to be more compliant with exclusive formula feeding (47) It is probable that a woman's knowledge and assessment of the risk factors might influence her either to exclusively breastfeed or not.

Prolonged breastfeeding beyond three months (others said 6 months) was also a common response 'because it's at this stage the baby starts teething/ a baby can bite the mother's breast, and the blood that comes out can be sucked by the baby'.

Also mentioned was that when children start teething they have open gums and if they bite the mother there is 'blood contact with the infected mother'. This may lead to the child getting the virus. This was the most commonly cited risk factor.

With regard to early introduction of solid foods before age 6 months as a risk factor, most women in Lusaka said this was because 'before 6 months the child's stomach is not strong enough to get solid foods so the child gets cracks and this allows the virus to enter'.

In Kitwe however, breastfeeding mothers felt that it was automatic to transmit the virus through breastfeeding for as long as the mother is breastfeeding because according to them 'it's the same blood... At least other diseases can be treated but not HIV if the mother has it'.

Most of them believed that though the child would still be infected by virtue of the fact that it had breastfed from an infected mother they would give other foods early with a view that 'virus should not multiply in the body'. For this group, the idea of early introduction of food as increasing the risk of transmission of the virus was not well articulated. Very few described breast sores as a source of infection to the child. For most of them in Kitwe the concept of 'breast milk being mixed with blood' was very pronounced. There was little discussion in Kitwe about the factors that enhance HIV transmission if a mother is breastfeeding except that:

*.... 'That disease (HIV) is in the whole body of the mother, so when a woman breastfeeds, it's like breastfeeding mothers blood' and since that virus moves in blood if the child breastfeeds the virus comes out through the breast milk. (BFFGD)*

The responses were quite varied from the men's side but at least most of them were able to state that breastfeeding is one source of infection for the child if the mother was infected. Though the risk factors did not seem to be very clear to most of them, the issue of blood and milk and whether or not breast milk constitutes blood was a matter of debate. Only one made reference to the fact that the virus could be found in the fluids and that breast milk is a fluid.

Most men like the women in Kitwe felt that it was automatic for a child to get the infection through breastfeeding because the child's blood is from the mother and milk has

a bit of virus since according to them ‘the body system is formed with blood’. They said the fact that the child was in a mothers womb makes it automatic. Some felt it was automatic because of what they say they see in the community about a family being wiped out then ‘we conclude that it is because of HIV’ (menFGD).

But even those who felt that it was not automatic that child could get through breastfeeding made reference that contact with blood if a mother had sores on the nipple or a child had sores in the mouth was a risk factor for child getting infected.

This kind of thinking was not consensus among the men as a few also mentioned that they had heard that exclusive breastfeeding could reduce the chances of infection as long as breast sores were avoided.

*... the child can't get the HIV virus through breastfeeding unless mother has a sore on the breast, baby can only get virus through mother's blood....Baby can't get virus through breast feeding (Gmen4).*

Although some contradictions sometimes seem to exist with regard to BF and HIV, women tend to have quite some amount of knowledge about transmission. It is probable that this understanding of the risk factors for HIV transmission during breastfeeding in Lusaka might serve as an option for the women to practice exclusive breastfeeding in the context of HIV.

It is clear from the discussions with the informants that the perceptions in the community are not only formed as result of the health education exposed to them but also shaped by personal experiences.

Some attitudes exhibited by some community members regarding why some women may not breastfeed could influence a mother to continue to breastfeed. Women who do not breastfeed are looked at as having a ‘chronic illness’ or assume that a woman had been tested and found HIV positive or that she had breast abscess or a boil on the breasts. This kind of thinking, they said, was different from the past were women who did not breastfeed were said to have sores or diseases like cancer and they could not breastfeed.



While having sore nipples was a commonly cited reason for not breastfeeding in the community, there was no agreement as to whether a baby could be put back to the breast after the sores had healed. Some scepticism was expressed that bringing the child back was tricky as one might think the sores had healed and yet inside have not properly healed and so it was better not to.

It is worth noting, however, that these experiences are given also in the light of what they say they have seen in the community as some of them were able to cite examples of such situations in the community. This again illustrates how the decision to either breastfeed or not might not just be made based on the information available to them but also on the personal experiences.

The understanding about whether or not it's automatic to infect child through breastfeeding has a great bearing on the practice of exclusive breastfeeding. While some have heard that if a child is born without the virus, it 'has to be breastfed for 4 months and can not get the virus' they still doubt as to how this can be 'because the child was in the womb and was formed from the infected blood of the mother'. There was quite a lot of debate and apprehensions in almost all the groups on whether or not the child could get the virus and whether it was alright to breastfeed. It is clear that people have a lot of concerns as the following interaction between pregnant women in Lusaka, George shows:

*...Me I get confused, on one hand we are saying the virus is found in the milk, and now that they give a pill to protect the child but can't the child get the virus when they breastfeed.....may be this pill works until about 4 months..... even the child is given a syrup to prevent infection..... then its better not to breastfeed.....no but at least 4 months is better for the child since they taught us that in the breast milk there is colostrum which helps the child to protect itself from diseases so if the child does not breastfeed where will it get these from?.....*

From the above discussion it is clear that the information about women getting the ARV may not be very clear. Some fail to distinguish between pre and postnatal transmission of

HIV to the child. This way of understanding may influence a women practicing EBF either way. The statement above may also depict the kind of dilemmas that women have to go through in making decisions about infant feeding, on one hand they are concerned about the threat of infecting the child while on another they are worried about not providing colostrum which has protective properties.

Some of the misconceptions arise as a result of the variations that people observe between what they apparently have heard through health education and what they see happen. This may be exemplified by some comment from the men's group where they said:

*'we fail to agree with what ZEBS are saying (exclusive breastfeeding to prevent MTCT) because of the experience in the community where we see situations where the child dies, mother follows and the father, so that is why we insist that the child will automatically get the virus.*

We see from the statement above how social influence may affect decision making about exclusive breastfeeding. The uncertainties expressed above are compounded by confusions about whether milk contains blood or not. Some of them contend that child will get the virus because it is formed with 'my blood'; was in my womb and that milk is mixed with blood. This understanding of how transmission occurs might undermine the feeding decisions that a woman makes depending on her convictions. What is also apparent is that the concerns of such women are not because they do not have information but that this contradicts with their own perceptions about the link between breastfeeding and blood contact. This may also be an example of conflict between biomedical and traditional knowledge. It is such conflicts that also create dilemmas for them.

A pregnant woman in Kitwe also highlights similar sentiments, asked if it was automatic that a child may get the virus if the mother was infected:

*I have just started hearing that an infected woman might have a child who's not infected but I don't know the explanation for that since it's the same blood..... But I think if a woman has HIV then the child will also be infected. According to what I know even if I stop breast feeding when the child is already infected I wouldn't solve any thing instead I would just be killing the child. (pregnant mum)*

While the above comment may show some kind of conflict in perceptions, it also shows some level of helplessness about the situation where she feels its automatic that the child would get the infection and sees no reason not to breastfeed, anyway.

#### **4.2.2.2 Knowledge and perceptions on Prevention**

If exclusive breastfeeding could be an option for women in the context of HIV, it was important to understand their knowledge and perceptions on how a mother may reduce chances of infecting the child, should she decide to breastfeed. Lack of knowledge on some of the preventive measures to reduce MTCT through breastfeeding might limit mothers or parents desire to practice exclusive breastfeeding. Asked whether they knew of methods to reduce MTCT through infant feeding practices, the main voice coming out was that replacement feeding was the best method but that most people can not afford and so even in the event that they tested positive they are likely to breastfed.

Main methods mentioned in relation to breastfeeding were; practicing exclusive breastfeeding, condom use, early cessation or no breastfeeding if mother is very sick. For most of the women from Chipata health centre in Lusaka, avoidance of breastfeeding was the best option and according to them that government should find ways of assisting the women. What was interesting is that very few of the informants from this site mentioned EBF as an option to reduce transmission, though they alluded to it during discussions on benefits of EBF and risk of infection between EBF and mixed feeding.

On the contrary while suggesting that avoidance of breastfeeding was an option, most of those from George health centre felt that exclusive breastfeeding could help with reducing the infection as this breastfeeding mother puts it:

*...If you know that you are infected you don't breastfeed the child when it's born or you don't start giving the baby anything apart from breast milk until it reaches the age at which you were advised to. If you start early then you are causing problems to the child like diarrhoea' (Breastfeeding mum)*

The same opinions were expressed in the FGD with those suggesting that EBF at least for 3months was better 'because before this age children don't have teeth that will cause bruises on the mother and the open gums to be exposed to the virus...They give a pill that makes the virus dormant and is not passed on the child at birth. They also have powder that is given to the child soon after delivery to kill the virus'.

It is probable the differences in the perspectives could be as a result of the exposure to the messages in the different project sites which had slightly different strategies in their implementation of the PMTCT programme. (see introduction) At Chipata health centre, though exclusive breastfeeding was an option, those who chose replacement feeding were provided with infant formula and so this might have acted as an incentive for not breastfeeding. At George clinic on the other hand focus is on early cessation of breastfeeding at four months and therefore enrolled women who chose to breastfeed. A review of trials on feeding options so far suggest that formula feeding could be an acceptable feeding option in urban settings with education, or intensive counselling and adequate water supply and when formula was provided free.(47)

Most men could not relate exclusive breastfeeding as a potential method to reduce the risk of transmission although they felt that EBF was better than mixed feeding. Most of them were either not agreeable or were not sure. Those who did not agree shared the same opinions as the mothers who felt because the child had been in the mothers' womb and so shared the same blood so they did not see how a child might not be infected.

Men further argued that it was difficult to talk about prevention when most of them had not tested and therefore that whether to breastfeed or not would be determined by the health of the mother.

Almost all the women in Lusaka site were aware about the availability of ‘a pill’ given at the clinic to pregnant women when they go in labour as a way to reduce infection though they also mentioned that this pill is only given to those that have taken the HIV test and known to be positive. The availability of ‘the pill’ was yet another reason cited by most pregnant women in Lusaka site for preferring EBF because according to them, if one is given the pill the ‘virus becomes dormant and child can not get before 4 months’.

This knowledge might compel some women to come forward and take the test in the hope that if they are found positive they can still breastfeed their children at least for a short time and therefore be able to avoid the stigma that goes with not breastfeeding a small baby. Despite having this knowledge, most of them were not forthcoming about taking the tests due to fear about the outcome of the test.

Avoiding pregnancy was also seen by some women as a sure way to prevent the infection.

Condom use was discussed in the focus groups for both mothers and fathers as a measure to reduce re infection during breastfeeding and it sparked a lot of debate about its feasibility to work because of resistance for its use by mostly men, but also some women. Men on the other hand felt that condom use was an option to help prevent MTCT but that it is better if prior discussion is made with wives to reduce the tension about mistrust. It was also discussed in the context that it could only probably work as a family planning measure

but not in MTCT situations as ‘we are talking about someone who is already infected’. Maybe it could work as a family planning method. But even as a family planning method, most women agreed with their male counterparts that it should be used after mutual counselling.

In Kitwe, the informants felt that condom use was the best way to reduce the HIV transmission, although they also agree that its use is not common in the homes because of mistrust between the partners. However, condoms were seen as being helpful to reduce re infection in the case of positive couples, not in relation to breastfeeding. It was also

apparent that men agreed to use condoms as a family planning measure and not otherwise as can be seen from the response of this mother when asked about how she balances between the fact that she was breastfeeding and that she had not taken the HIV test:

*I think it's better to tell him that we are using it as a family planning method not as a prevention method because then he can agree.*

This kind of sentiment probably comes from the connotation of the use of condoms in marriage as a sign that one has been unfaithful to the partner. What also come out is that the concept of avoiding re infection during lactation through the use of condoms is not well understood, and therefore this might work to the disadvantage of exclusive breastfeeding.

Voluntary Counselling and Testing has been described as an entry point for HIV prevention and care. Knowing ones sero status is a critical component in the process of PMTCT as it empowers women to make informed choices about the feeding options. VCT also helps parents to make decisions about family planning and condom use in the interest of a young infant and health of the mother. The participants were accordingly asked their views about VCT, especially as it pertains to their feeding options.

Most of the participants in this study had not taken the test despite the fact that they either had young babies breastfeeding at the time of the interview or were expecting a child. Interestingly most of them said they found VCT to be beneficial as it helped couples to know how to look after themselves and 'live longer and find some means of sustaining their lives'. There are some barriers why they are not coming forth despite this knowledge as one mother from George puts it:

*It wouldn't be nice for me to go alone in case I test positive so it's better to go together so that what ever the results they counsel you together. If am positive and counselled I would know how to 'live' (look after myself) but my friend wouldn't, so it wouldn't be good unless you are together (breastfeeding mum).*

Many shared this opinion on the desire for couple counselling. The incentive of the chances of being counselled and provided with advice may just be a good possibility for women to confidently feed their babies knowing that they have the support from their husbands. Other women fail to take VCT saying that their husbands might not believe them if they went alone for an HIV test and that as such it would also be difficult for them to disclose the results and consequently this might have impact on their feeding decision. It has been documented elsewhere about the importance of significant others on a woman's breastfeeding decision (48)

Other attitudes expressed with regard to VCT may also be detrimental to the PMTCT efforts.

Despite knowing the benefits some fathers said:

*....But my worry is that I don't want to live like a prisoner given a situation where am told we are both HIV positive, am bound to divorce her. I will live uncomfortable life because whenever I start sneezing or coughing, I will suspect that my time for leaving (dieing) is now. (father)*

*VCT is the best way even though we have not gone for a test because we are just waiting for the mothers.....the results can bring conflicts in the home. Both of you start accusing each other of having infected the other.(father)*

These sentiments were actually augmented in the women's groups. The women however seemed more receptive about taking the VCT save for their husbands' attitudes on the issue. Because of the negative attitude by the men most women said they preferred couple counselling as it would ease the tension in the event that one of the couples was found to be positive. *Nowadays it's important that you know your status. 3/4s of men refuse even if they bring STDs home they will still tell you that you are the one who infected them.(breastfeeding mum)*

One interesting reason for not taking VCT in George clinic was seemingly due to myths about the purpose of the PMTCT in the area. At the time of the interview there were

quite rampant rumours that the project in the area had links with Satanists and that blood drawing was meant to be some sacrifice for satanic worship. This rumour was, however, not at all mentioned in the other site in Chipata clinic. It would therefore appear that this was just being used as a scapegoat for their own fears about taking an HIV test and the reality of the having a positive result.

#### **4.2.3 Economic and social status**

It is also apparent that exclusive breastfeeding is practiced not only because of its nutritional/health benefits but because of economic reasons. Some fathers said their wives exclusively breastfed their child because they could not afford the infant formula. This opinion was also expressed by some mothers who reported that they breastfed because artificial milk is expensive.

Although this was a minority view, it could be an indication that infant formula is still held in high esteem by some families as it was a sign of prestige in the past to give infant formula to the children instead of breast milk. In time of HIV/AIDS some fathers expressed that because of the fear to transmit the virus it would be better to give children infant formula but are constrained by the lack of purchasing power as this father puts it:

*....Every person who's born starts with breast feeding unless may be our English friends are the ones who use bottles and tinned milk. But nowadays with diseases, it would be better to give tinned milk but then it's only those who have got money who can afford....so what can we do ....just breastfeed. (father)*

From the above statement, it also appears the men share the same dilemma with their women about breastfeeding where, one on one hand they feel breastfeeding is the right thing to do, while on the other they also feel formula feeding would be an alternative, save for the economic constraint.

Study participants also reported that the lack of alternatives to breast milk is what forces women to breastfeed even in situations when they know that they are infected.



*....Some of us may agree that we will not breastfeed but we may not afford as a result we will start buying milk any how, today Bonita, (a local pasteurised milk) maybe tomorrow we change and end up with the one that they sell at the market in cups....(pregnant mum)*

The fact that infant formula is provided in some PMCT pilot sites does not give some women enough confidence to opt for formula because of a lack of trust of the consistency of the flow of the formula so they maintain breastfeeding. A pregnant woman at Chipata health centre shares her concerns about infant formula:

*.... suppose you find there is no milk, since even the medicines sometimes we find there is nothing?... no, but the milk is found....I know someone who comes and gets milk....she's just lucky because even some TB patients finish treatment just being told there is no medicine.(one opinion P mums FGD)*

The perceived inability by health workers to consistently provide infant formula or lack of confidence in the health delivery system seems to be an overriding factor in opting for breastfeeding. Breastfeeding appears to be the most rational option in this case as this woman weighs the potential possibilities and constraints for her choice of infant feeding and subsequent health of her child.

The capacity for men to provide enough food for the family and especially the lactating mother 'in order for her to have sufficient milk for the baby' is a factor that forces them to introduce porridges to babies early. This pressure they said is increased sometimes by the mother insisting that she does not have sufficient milk for her baby. On the other hand some have seen the lack of sufficient food for the whole family as a reason to exclusively breastfeed their infant so that the family is not stretched further by providing food for both the mother and the child.

Other than medical reasons, informants report that some women fail to exclusively breastfeed due to employment status of the mother. The competitive economic situation means that women are forced to go out in search of work leaving young siblings and hence this also affects their feeding pattern. A father narrates his experience as such:

*‘my wife used to express the milk because she used to do some piecework, and would leave the milk in a cup with other small children ....when the milk finished I would be forced to go and buy some milk...and give the child. I noticed that the child didn’t grow properly, started having diarrhoea’.*

This points to the issue of hygiene factors with regard to expressed breast milk. Even though expression of milk is encouraged, it brings with it the question of feasibility and practicality of the practice.

Sometimes failure is due to prestigious reasons where some still feel giving infant formula is a good sign that a family is economically sound and can afford to buy enough food in the family.

*....it is meant to show off that you have the money,...It is not easy to exclusively breastfeed child when there are other foods in the house. (father)*

Women in Chipata conceded that some working mothers start feeding their children early, while others still find it prestigious ‘to give the bottle’. Such women were said not to be common, though.

Among the women in George, the issue of status as a reason not to EBF child hardly came out as an issue as in the case of the women in Chipata. It is probable that giving a reason as working or prestige could be a way of coping with not being able to breastfeed. This may also be as result that during the project implementation in Chipata area, avoidance of breastfeeding was part of the options that women were given and therefore sought ways to try and explain to neighbours.

#### **4.2.4 Attitudes and beliefs about (E)BF**

There are some strong beliefs regarding child rearing and weaning which affects the feeding patterns and may have great influence on whether or not to breastfeed in the era

of HIV/AIDS. It was therefore necessary to solicit these attitudes, first about breastfeeding, then about breastfeeding and HIV. From the interview data it appears there are few traditional beliefs that might be enhancing to practice exclusive breastfeeding.

One of the most recurrent is the belief that when a mother becomes pregnant with another child she should stop breastfeeding to protect the child from being contaminated with the other child's milk. This was quite common in all the groups and attracted a lot of discussions as to whether this belief still holds. Most women indicated that these days most of them no longer believe in that because 'we were taught that what is in the womb does not go to the breast and vice versa'. Some women did also mention that they no longer believed in this belief because they had breastfed while pregnant and nothing happened to their child' It has also been suggested that a mother's beliefs about infant feeding methods arise in part from interactions that she may have with various formal or informal social network members and these may either be positive or negative towards exclusive breastfeeding (49)

It should be noted that these women are urban women who interact with a lot of other women from different regions with different beliefs about pregnancy and breastfeeding so it is not surprising that some of them may now be influenced by their friends' experiences and begin to look differently about pregnancy and breastfeeding.

It was apparent from discussions however, that cases of a woman getting pregnant when the child was less than 6 months were not common and that if that happened, traditional medicine was found so that a baby could still continue to breastfeed.

Pressure to start feeding solids from close relatives was cited as yet another reason why the mothers are forced to start solids early. Both mothers and fathers conceded that the pressure was more pronounced if it's the first child and one tends to succumb because they feel people giving the advice have experience with child feeding. It is easy to succumb especially when pressure comes from different source as this mother of five children from Chipata health centre explains her situation on her child who was forced to introduce solids at five months:

*... It was the father's idea that I introduce my child to supplements early because baby used to cry a lot and so we thought it was because he never used to get satisfied with breast milk. Also pressure from neighbours and my parents made me start early. (breastfeeding mum)*

From the above statement we can also see the idea that as the child grows the milk is not enough as has been cited. The father's role in influencing the feeding decisions sometimes is limited in the sense that some are only informed by the wives that child is ready to start. Some women contend to this saying it's their responsibility as wives to determine when to start feeding the child.

Pressure could also come from within homes where the wife insists she does not have enough milk because she feels she has not enough food and so prefers to give cerelac.( an infant weaning cereal)

Men also shared this view of giving porridge if they felt that the woman does not have sufficient milk. They determine that a child is not having enough food if according to them child cries too much even after breastfeeding and mother ends up with sore nipples. One of the important messages in the breastfeeding programme has been on proper breastfeeding attachment to enhance milk flow to the child. If the child is not properly attached and latched on to the breast, then it is possible that child may not get adequate milk supply even if put on the breast for a long time. Perhaps this is one area which those in the promotion campaigns must re emphasise if women have to successfully exclusive breastfeed.

The social environment where the woman is overwhelmed by domestic chores puts some women under pressure and so they give porridge so that the baby sleeps for a longer time and that allows them to 'concentrate on other work at home'. Most women in the focus group from Chipata were agreeable about this.

There are also some beliefs that when a child starts 'grubbing food from mother' it's a sign that it's ready to start eating. Some women mentioned that they start feeding solids

at 4 months because they believe that is the right time to start eating as some children even start teething at this age, which for them again is a sign that the child is ready for food. There are also strong beliefs that a child also gets thirsty just like adults so can't live on breast milk only without water. A mother of three from Lusaka shares her experience with difficulties with exclusive breastfeeding as she says:

*.....At clinic we are taught to start at 6 months but this is not feasible because baby can not be satisfied with only BM after this age, (4months) as they grow they need more food. Its difficult not to give water because when the child starts eating other foods, it also gets thirsty like anybody else therefore needs to be given water. (Breastfeeding mum)*

This case is yet another example of the conflict between biomedical and traditional knowledge. The above woman has two other children whom she introduced to solids at four months because for her that is what is feasible. There were several women who agreed with her about the concept of water.

A few women contended among the pregnant women's group in Chipata compound site that when a child is very small at birth mothers are forced to start early in the hope that the extra food helps the child gain more weight. This attracted a lot of discussions in the group where others felt it was not necessary to give extra food as the child could just be small in nature. This belief may also be a contradiction with the reporting that EBF provided all the food that the child needed. This kind of understanding and explanations also suggest that being exposed to correct information does not in itself make people change their behaviour but would still be glued to their beliefs.

A mother may not practice exclusive breastfeeding if she has not had any problems with mixed feeding with previous children as a woman in Chipata compound illuminates:

*'Though we are told not to start feeding baby on solids before 6 months I don't really agree that food brings problems according to my experience with the five children that I have none of my children had problems when I started giving porridge (pregnant mum).*

For her four months remains the most optune time.

The men also had other perspectives of why children are introduced to the solids early.

*...Child was introduced early because he was suckling too much from the mother and was not giving her chance to rest that was not good enough because she was abusing my woman'.( Gmen2)*

*...often times, when a woman has a child, it looks like she pays more attention to the child than to the husband so there are times when I want to discuss with her, she comes home, she breastfeeds, you find that she is already fast asleep. ....its like I am missing a lot.... (father)*

The above comments by men regarding the attention that they apparently miss from their wives when they are nursing a small child could probably explain why some women feel that sometimes men put a lot of pressure for them to start giving solids to their babies.

For the Kitwe respondents, the overriding reason for none adherence to exclusive breastfeeding also appears to be the issue of inadequate diet for the mother as the following separate interactions suggest:

*My only problem is that nowadays food is a problem so as the baby grows older milk ceases to be enough if you don't eat a lot.....the only secret (to EBF) is that the mother needs to eat a lot for her to have milk all the time and she must be consistent or patient in feeding.*

*We are considering starting (introducing solids) 'Patu ibele talilesaka' ( not producing enough milk) and even the father said I should buy porridge because when the child breastfeeds there is normally no sufficient milk. Probed on the weight gain of the child she said - It's been good he gained last month, said this 26 year old mother of three. At the time of the interview the baby was three months old.*

*...We are told that children should be EBF till six months but sometimes we do not follow that because the diets for the mother is mostly inadequate so we feel the child does not also have enough and cries constantly so we are forced to start early.(pregnant mumsfgd)*

The data so far on reasons for failure to exclusively breastfeed show that there are still a lot of barriers to EBF, arising from attitudes and beliefs on breastfeeding. While these may not directly relate to breastfeeding and HIV, they are still important to bear in mind during counselling in this era of HIV as they may impact on the feeding decisions that women make even in the era of HIV.

#### **4.2.5 Attitudes and beliefs about BF and HIV**

There were varied beliefs and perceptions about breastfeeding and HIV. Some of them might be enhancing the practice of exclusive breastfeeding while others may not. Some of the respondents beliefs include that breast milk is different from blood and therefore that the child can not get the virus; that the child contracts the HIV virus right at conception so it does not make any difference whether it is breastfed or not.

*‘...Baby should still breastfeed because milk is different from blood.....Just ensure that the mother is given a lot of food so that she has enough milk for the baby but if you notice that the mother’s health is not improving, then baby should be stopped from breast feeding, because it would be finishing mother’s strength completely.(father)*

Once again one can see that there are some elements of dilemma in making decisions as several factors are considered. On one hand they are concerned about the health of the mother as in the text above while on another they are concerned about the value of breast milk. Although these beliefs could be misleading, people are sometimes guided by such and they decide to breastfeed based on such beliefs. What is interesting though is that even when some of them have access to the correct information, they doubt it based on what they apparently experience in the community.

*...because breastfeeding helps the baby to prevent diseases so it does not help to stop breastfeeding because there is HIV/AIDS – especially the fact that the child has initially breastfed (meaning it has already contracted the virus!) so what's the point of breastfeeding for a short time and then stopping'. About half the group shared this opinion.(fathers FGD)*

There were similar sentiments as the above from the different groups.

Asked how they felt about Breastfeeding promotion in view of the information available on the risk of transmission, several reasons were advanced that may positively influence the EBF. The main voice from Chipata compound on why it should continue was that not many people could afford the Breast milk substitutes (BMS) and that not everyone has the disease. Similar sentiments were made regarding exclusive breastfeeding; that in order to avoid 'cracks in the stomach' of the child it is better to exclusively breastfeed. Other reasons are related to the HIV status;

*...if people don't know its better to go for VCT if they suspect, otherwise just exclusive breastfeeding because breast milk is best for babies and it provides bonding for mother and baby... some mothers are positive and some are negative , and also depending on how serious the sickness a child can breastfeed, its up to Doctor or Nurse to decide.... (Breastfeeding mum)*

*.....a lot of people do not know status and because breastfeeding is the best food one can give to child who is less than 6 months. And sometimes a mother wouldn't stop breastfeeding child because she thinks she is denying baby mothers love. Positive mothers should be allowed to breastfeed at least for a short time.(breastfeeding mum)*

The statements above clearly testify that the reasons for still being pro breastfeeding go far beyond economic reasons of not being able to afford but point of issues of HIV status where they say not every one is infected, maternal bonding and the health status of the lactating mother. Perhaps also important is the feeling where they feel if that it's up to a



doctor or nurse to advise them whether or not to breastfeed. Interestingly, though they say they do not know their HIV status, it is not due to unavailability of the facilities. According to the mother quoted above, she has not taken the test because she says she feels very strong and that the husband has refused to take the test.

The statements may also illuminate the dilemma that people seem to be caught up in between the benefits of taking the HIV test and the fear of helplessness that is associated with being HIV positive. In spite of these dilemmas where a lot of issues are being weighed to make decisions, there is still a window of opportunity for health workers to try and assist these mothers to make decisions because they still think that the health worker should be the one to determine whether a mother should breastfeed or not.

According to the men in George, they felt EBF was still worthwhile as they felt that it was safer, and has all the nutrition for a child and ‘medicines to protect the child’. But perhaps the most interesting reason was that if the child is already born otherwise, it would be better not to have children since even at birth the child can contract the disease and child could die faster without breastfeeding. This kind of opinion is similar to what some women feel as this pregnant woman from George clinic explains asked if she could breastfeed even if she found that she was infected:

*I would since am already pregnant and since that is the baby's food and I can not start giving the baby other milk when it is just born because it is different from breast milk. Children don't get diarrhoea if they are breastfed.*

The above statement points the dilemma that women may be facing. First, her concern is that by virtue of the fact that she is pregnant means she is expected to breastfeed to fulfil her social role of mothering, more so also due to maternal attachment with the unborn child; and then she is also concerned about the nutritional and protective benefits that accrue from breastfeeding. This tendency to suggest avoidance of pregnancy instead of breastfeeding was seen in a lot of other instances during interviews.

Some men further felt that EBF was better since heard that they have found some drugs to protect the child, that ‘*you are the experts so you know what you are talking about*’. Two people shared this opinion in the men's group although it contradicts earlier

statement where they say they don't believe what ZEBS is saying about exclusive breastfeeding. The fathers' opinions about breastfeeding in era of HIV are important for us to take into account as we have seen that they have potential influence on the feeding options on the mother.

Sentiments from women about breastfeeding promotion were not different from their counterparts who also felt that EBF was better since the BMS are out of their reach. Further, women also felt that EBF promotion should depend on what kind of counselling one has received, as this pregnant woman from George clinic puts it:

*if you know that you are negative then you have to exclusively breastfeed but if you are told that you are positive then obviously you have to follow what you are told, whether to exclusively breastfeed or just breastfeed for a certain number of months because your concern would be the child's health.(pregnant mum)*

There were diverse responses about who had higher chances of infection between a child on exclusive breastfeeding and that on mixed feeding. However most of the informants in Lusaka reported that EBF was better than mixed feeding in times of HIV. There were quite a number of them in Lusaka who felt that .... *'child who is on EBF will get the infection faster than the one on mixed feeding though both of them will be infected because child on EBF is not getting other foods to help fight the disease so this child will look sickly.* Such sentiments are similar to those expressed in Kitwe where most also felt that exclusive breastfeeding was at a higher risk because they felt the food can help to protect the other child as amplified by the sentiments of this pregnant woman:

*... if mother knows that she is infected she should supplement breastfeeding with other foods but most mothers are careless so they just continue with exclusive breastfeeding even though when a mother is HIV positive the breast milk is not 100% (Its contaminated)(pregnant mum)*

It is interesting to note that such kinds of opinions might be influenced by what some of the women may have experienced in the feeding practices either with their own children or through their neighbours. Those that have not practised exclusive breastfeeding for six months in the past and have not found any problems are likely to feel that EBF would be at a higher risk.

There appeared to be some contradictions sometimes on the issue of mixed and exclusive breastfeeding, which should send some warning signals to anybody in PMTCT or infant feeding counselling. My interaction with a breastfeeding mother from George health centre perhaps illustrates some contradictions or even dilemma that these women have regarding exclusive breastfeeding and mixed feeding in times of HIV:

*The one who is eating other foods and breastfeeding at the same time because it has not reached the right age to start eating food yet. How is that going to increase the risk? The food might not be properly prepared. How is the food going to facilitate transmission? –am not sure. Why don't they allow giving food to children below 6 months old? It's because there's enough food for the baby in milk up to 6 months. So Who would have a higher risk then? The one who's just breastfeeding. Why? Sometimes, the baby can just be breastfeeding from the mother and get the virus. Why not the one eating other foods? Because the food can sometimes help to prevent the baby from diseases.*

*What type of food and how since you said there's everything in breast milk? I'm now confused.(breastfeeding mum)*

But this confusion is also exemplified by their counterparts in a Kitwe focus group discussion who felt that *"It is better to give the child other foods with vitamins to help him grow .....the vitamins in the breast milk are not good since the mother is infected"* another interjects and says *"If child is sick it cant pick up quickly no matter how much foods you give"* (breastfeeding group)

It is worthwhile to note however that there were mixed opinions about the issue of mixed versus exclusive breastfeeding when there is HIV, more so in Kitwe. There were very few contributions in the focus group regarding this issue and most indicated that they

were not even sure of the responses they gave. Most of the respondents in Kitwe felt the risk is the same since both children are breastfeeding from an infected breast. There were a few respondents in Lusaka who felt that both children can get the virus as long as they are breast fed. They felt EBF up to 6 months does not help in any way in preventing MTCT according to them as long as the baby is being breastfed from ‘an infected breast’

*...the virus does not live in food so the risk is the same in both children regardless of at what age the child is introduced to the food, whether at 3, 4, 5 months. (father)*

Their perceptions on mixed feeding contradicted with the assumed knowledge on HIV transmission and the role played by exclusive breastfeeding. Although most of the men felt that EBF was good, when it came to HIV situation they felt mixed feeding was better as it gave the child ‘extra vitamins’ from the food and that would protect the child from getting the virus. This tends to bring questions as to whether the information they receive about the risk factors for HIV transmission through breastfeeding is well assimilated.

There was a tendency to link the type of feeding option on the health status of the mothers as this father explains:

*...If mother is infected and you see that her health has started changing...you need to stop her from breast feeding and start giving child ‘soft’ foods ....because her body becomes weak and doesn’t have strength to breast feed. Asked again what feeding option would be suitable this man changes his mind and says... Exclusive breast feeding because breast milk has everything needed for the growth of child. If you breastfeed the child ‘a bit’ it will start having diarrhoea (father)*

From the above statement, it is clear that introduction of foods to child when the mother is HIV infected is not necessarily linked to prevention of transmission but to conserve energy of the mother. But again it appears there is also a consideration about the value of the breast milk for a small child. This is what creates the dilemma for them and they have to weigh the options and constraints in making decisions.

Other views expressed about breastfeeding and mixed feeding during HIV were that breastfeeding increases the risk of infection; that providing good food to a child prolongs their life even if infected; that prolonged breastfeeding is a factor in the MTCT; that breastfeeding prolongs child's lifespan even if infected as long as mother does not frequently get sick. This view was also expressed in the men's group meeting that the use of tinned milk should be encouraged because of lack of trust by partners in the home.

#### **4.2.6 Attitudes towards non BF mums**

It is not common for a woman not to breastfeed a small child and if one is found she is labelled as either 'kanayaka' (She's HIV positive) or pregnant, maybe going back to school, or maybe has sores on the breasts, Due to such labels as being HIV positive and the stigma that goes with it, some women continue to breastfeed even if HIV positive because they would not like their friends to know. Such views were expressed across all the informants. Most of them also mentioned that in the past if one was not breastfeeding a small child it was probably that they had sores on the breasts. The perception was now more inclined to suspecting that one is infected if they don't breastfeed.

#### **4.2.7 Maternal instincts**

Most women did report that one of the things that health workers have been emphasizing with regard to breastfeeding unlike in the past is that of mother- child-bonding by early initiation and demand feeding. This, coupled with the fact that non breastfeeding mothers are ostracised, might account for some women feeling that despite the HIV threat to breastfeeding it is better that women be allowed to breastfeed a bit. Some women expressed feelings such as the obvious thing when a child is born is to breastfeed or that since one is already pregnant the only thing is to breastfeed, even for a short period. One breastfeeding mother from Chipata health centre describes her concerns in this way:

*...I do at times think maybe kalyaka kale (already infected) but because I have to give mothers love we wait up to the time baby starts walking that's when we wean the child*

*thinking achilimutuntulu umwana kamusumune bwangu { maybe child is still ok so let me wean him soon}).( breastfeeding mum)*

Another one expresses herself in this way:....*The other reason why I can breast feed is because of feeling pity for the child. Why should my baby pay for the sins it did not commit.( pregnant mum)*

Sometimes even when a mother suspects that she could be infected she continues to breastfeed because of the feeling that breastfeeding is an expression of mothers love to the small baby. While this feeling maybe due to the emphasis in the breastfeeding promotion campaign, it may also be influenced by the fact that this is a society where breastfeeding is the norm and that it is also a valued attribute of child bearing and an affirmation of motherhood. (33)

Similar opinions about the instinctive nature to breastfeed and ‘feeling pity’ for the child were expressed across the different women’s discussions. Interestingly though, this opinion was not shared by the men. This may not be too surprising though as in most African societies, breastfeeding and infant care are entirely in the female domain.

#### **4.2.8 Support and personal experience**

Some men reported having provided moral support for their wives to practice exclusive breastfeeding because of their own experience with it and the knowledge they had gained from the health centre. When close relatives like husbands provide a conducive environment for exclusive breastfeeding, women are likely to practice it. This might also help to influence the other immediate members of the family. But perhaps this is dependant on how well the husbands understand and appreciate the value of exclusive breastfeeding even when there is HIV. Several studies have so far suggested the importance of involving men in discussions about infant feeding even though acknowledging that women are the ones involved in the day to day affairs of infant feeding.(35) The pressure to introduce solid foods to babies by the fathers is dependent on their capacity to purchase breast milk substitutes. Some women reported that some

husbands simply purchase porridge and ask their wives to give the child. This was confirmed by some men.

On the other hand it is clear that what happens in the community by the immediate neighbours has a likely potential influence of the other members or it is used as a reference point for their further actions. Most of the informants' describe situations in the community that make them share certain opinions. For instance in the case of exclusive breastfeeding many attest to the fact that they have confirmed about the importance of it through their children's experiences. Others claim to have seen situations where mother ceases breastfeeding early because she was too sick to breastfeed and the child survives. Such experiences are likely to positively influence women to breastfeed.

#### **4.2.9 Summary of the results on options and constraints for breastfeeding**

##### **4.2.9.1 Benefits of exclusive breastfeeding**

Participants described many perceived benefits of breastfeeding such as health and nutritional benefits mainly to the child. The safety of exclusive breastfeeding as compared with mixed feeding was also an attribute that was mentioned. A few of them also said exclusive breastfeeding helps with family planning. Participants did also provide personal experiences with exclusive breastfeeding some positive others negative. Some mentioned that they practiced exclusive breastfeeding because they could not afford infant feeding formula, or simply because the child did not give any problems so they did not introduce solid foods early.

##### **4.2.9.2 Knowledge of HIV transmission**

Respondents from all the sites felt that a child could get the HIV virus through breastfeeding. However, the understanding of the risk factors differed between Lusaka sites and in Kitwe. Lusaka participants felt that though the possibility was there to transmit the virus, it was not automatic, but depended on whether the child was introduced to the foods before 3-6months, whether the child had sores in the mouth or

open gums and whether the mother had sore nipples. According to them the contact between mother and child's blood was a big risk factor for transmission. Within the Lusaka participants, men as in the Kitwe group could not articulate the risk factors for HIV transmission if a mother was breastfeeding.

The Kitwe group, as in men's group, felt the transmission was automatic because of their conception of the blood and milk relationship where they felt that milk is formed with the same blood as that of the infected mother and therefore could not imagine how the child could not be infected. It is this understanding that also made them not to relate that exclusive breastfeeding could be a potential measure to reduce infection. It is clear also from the data that the knowledge about HIV transmission is not only derived from the biomedical understanding but also from their conception about blood and milk and on experiences in the community.

Finally, although some contradictions do seem to exist with regard to breastfeeding and HIV, women tend to have quite some amount of knowledge about HIV transmission through breastfeeding.

On prevention of HIV infection to the child, avoidance of breastfeeding was commonly cited in Chipata clinic while in George health centre practicing exclusive breastfeeding at least for 3-6 months was seen as an option. The option of exclusive breastfeeding was also mentioned in the context that they were aware of the availability of 'a pill that makes the virus dormant in the first few months'. Other preventive measures mentioned were condom use, early cessation of or no breastfeeding if the mother is very sick.

Knowledge on the possibility to transmit virus could also serve as a constraint to breastfeeding. Many women in this study mentioned that one of the main reasons for women not to breastfeed was due to being infected with the virus. Having chronic illness was yet another reason cited for not breastfeeding. Some participants believe that if a mother is HIV positive then she is stopped from breastfeeding. This kind of thinking was mainly from the Kitwe group. Knowledge on risk factors for transmission might serve as a constraint in the sense that some felt that HIV positive mothers stop breastfeeding so that they do not infect the child through breast milk. The participants' knowledge on HIV transmission through breast milk could also be influenced by a variation of the



information they have heard through health education and what they observe in their day to day lives. Such social influence might serve as a deterrent or an option to breastfeeding.

There were contradictory views about VCT and condom use as measures to help reduce infection during breastfeeding. While most of them felt VCT was important several factors were described that hinder utilisation of this service. Fear of a possible positive result was one of them. Stigmatisation by community members was yet another. Condom use as a preventive measure was also seen differently. The resistance to use it in marriage was a point of debate, as it is seen as a sign of infidelity. Some participants did not see how condoms could reduce re infection when one was already infected. It was seen more as a family planning method not in HIV situation.

#### **4.2.9.3 Economic factors for breastfeeding**

Apparent from the data is the dilemma that the community is facing in making decisions about infant feeding in the context of HIV/AIDS. While some say avoidance of breastfeeding may be a good option, purchasing power for most of them may hinder that choice. Data from all sites suggest that breastfeeding may be practiced not necessarily due to nutritional or health benefits but due to the fact that some families are not able to afford other breast milk substitutes for the infants.

In a few instances the women reported that some women did not practice exclusive breastfeeding in the case where women are employed, others also due to prestigious reasons where they feel that giving formula is a good sign suggesting that a family is economically sound and can afford to buy enough food in the family. These kinds of sentiments were more reported in Chipata area and in Kitwe. The issue of status hardly came out in George area.

Social economic factors therefore influence both negatively and positively on the practice of exclusive breastfeeding.

#### **4.2.9.4 Attitudes and beliefs about (e) BF**

The main finding about beliefs on breastfeeding is one that relates to pregnancy and breastfeeding. Most women suggested that they feel a child may still continue to breastfeed even if a mother gets pregnant while breastfeeding, contrary to earlier beliefs. Some also described different situations where a woman has continued to breastfeed while pregnant and that the breastfeeding child was not negatively affected. Seen from this perspective this is a positive attitude that may facilitate breastfeeding.

Some attitudes and beliefs might however hinder the practice of exclusive breastfeeding. They include beliefs about pregnancy and breastfeeding, pressure to introduce foods, especially in the case of the first child, milk insufficiency due to mothers' apparent inadequate diet, and the social environment which puts pressure on women to give solids due to overwhelming domestic chores. Others felt four months was just the right age to introduce foods while the issue of thirsty as a reason to introduce water was still contentious in all the groups. Some of the attitudes about reasons for failure to exclusively breastfeed arise due to personal experiences.

While some of the reasons may not necessarily relate to breastfeeding and HIV, they are still important in the context of HIV, as they may negatively impact on the feeding decisions that a woman makes.

#### **4.2.9.5 Attitudes and perceptions about BF and HIV**

We are able to explicate some insights about perceptions on breastfeeding and HIV that might serve as possibilities or constraints for breastfeeding in the context of HIV/AIDS: The level of understanding about the risk factors for transmission, about prevention and again about the blood-milk relationship show that these may act as factors influencing exclusive breastfeeding. The blood and milk relationship to some means that child is infected in utero automatically. I should emphasize though that some of these perceptions might not be correct seen from the biomedical perspective, yet people are still guided by them so it is important to take stock of them. Secondly, Women in Lusaka felt exclusive breastfeeding as an option than mixed feeding in an era of HIV. Most men were either not agreeable or were not sure.

Thirdly, most respondents still have positive attitudes towards breastfeeding promotion due to various reasons. They said not everyone has the disease and that many people don't know their HIV status; the safety, nutritional and protective factors associated with breastfeeding; that mother's health status should be a deciding factor; that BMS are out of reach for most households; that exclusive breastfeeding helps bonding between mother and child. The instinctive nature to breastfeed was however not shared by the men's group. Fourth women experience dilemmas about making decisions on infant feeding due in part to the social expectations about motherhood and breastfeeding, the perceived value of breast milk and also the stigma associated with not breastfeeding. Further, the dilemmas are compounded by the fact that they are not based on single but several factors.

Fifth, while these dilemmas exist, data suggest that there is a window of opportunity due to attitudes where some respondents suggest that it is better to avoid getting pregnant than to stop breastfeeding; where they suggest that the decision to breastfeed or not must be dependent upon what the health practitioner advises and that decisions should not be made on suspicions but on whether someone has had counselling and testing. Finally, participants described the different experiences that they have had with regard to exclusive breastfeeding, and breastfeeding and HIV that may positively influence their infant feeding decisions.

While most of the above may seemingly appear positive some of them may not. The concept of exclusive breastfeeding vis a vis mixed feeding in times of HIV infection is a source of concern. Most of the participants in Kitwe and some in Lusaka tended to think that when a mother is infected then the breast milk can not provide optimal nutrition to the child, hence the need for additional food for 'extra vitamins' for the child. Although men also felt exclusive breastfeeding was better than mixed feeding, they did not relate it as a potential measure to prevent HIV infection. Their concern was more about the fact that the child had been in a mother's womb; therefore there was blood contact so they did not see how exclusive breastfeeding could come in. For most men there was a tendency to link the type of feeding method to the health status of the mother. There were some

in Lusaka who also felt that though any child breastfed by an infected mother would get the infection, the one on exclusive breastfeeding would get the infection faster because it would not be getting extra food to help fight the disease. Providing good food to a child who is infected prolongs their life. There appeared to be uncertainties also about where the risk is highest between exclusive breastfeeding and mixed feeding.

There are doubts as to how a child born of an infected mother may be virus free. Some fail to distinguish between pre and postnatal transmission of HIV to the child. Data shows that some of these concerns from women are not because they do not have information but that this new information apparently contradicts with their own conception about breast milk and blood.

### **4.3 Risk Perception of HIV transmission to child, through breastfeeding**

Part two presents findings regarding participants' perceived risk of infecting their child and how that affects their feeding practices. Participants were asked whether or not they felt they could be at risk of being infected with the HIV virus, why they felt so and situations when they felt more vulnerable. Information was solicited to gather feelings about whether they would still breastfeed if they suspected that they were infected or how the knowledge about risk of HIV transmission through breast milk had impacted on their feeding decisions.

#### **4.3.1 Behaviour of husbands**

Almost everyone felt they were at risk of HIV infection; the women because they were married and were not sure of their husbands' lifestyles outside marriage; the fathers because of their behaviour were they feel that their women 'are not enough' or that they 'want to give chance to their lactating wives and in the process have sex with other women'. The lack of trust for the husbands was the most cited reason for feeling at risk. Other studies have revealed similar reasons for feeling at risk (50) Most of them also said they had not taken the test and hence felt it was not easy to know if they were infected.

Despite this feeling the mothers were all breastfeeding because they felt since they had not taken an HIV test to confirm or because 'I feel okay so I can go if start feeling sick'.

#### **4.3.2 Maternal health and ANC screening as a proxy for HIV status**

It was interesting to note how women have used their own health status during pregnancy as a proxy to feel at risk of HIV infection. Some mothers breastfeed because they felt strong and healthy during pregnancy when, according to them, they are most vulnerable. Other women felt that even though they felt at risk due to the behaviour of their husbands, they still felt confident to breastfeed because they had not experienced any problems with their previous pregnancies and had normal deliveries in the past. For them that was a sign that they may not be infected and so this made them feel ok.

Another interesting reason that gave them the confidence to breastfeed was that they had taken a 'blood test during pregnancy and 'they (health workers) did not find anything.' This was however highly debated in all the women's focus group discussions as to whether or not the blood screening done during antenatal was also for purpose of HIV testing.

*.....During my pregnancy I never used to get sick even when I took some tests in pregnancy they wrote on the Ante-natal card that I was negative so I took it that I am healthy.....They took my blood during ANC and they didn't find anything so how can I think about it. You see most of us think when they test our blood during ANC they are also checking for AIDS (bffgdktw)*

It is likely from this that some women were not too sure about the purpose of the screening done during ANC and a test for RPR or HB might be taken to include that of HIV which is supposed to be voluntary.

#### **4.3.3 Health of their babies as a proxy of their own health status**

Most respondents also agreed that they use the health of their babies in the first six months as a proxy for their own health status and that of the baby. According to them, children easily show signs than adults. The health of their children could be a determinant

whether to take an HIV test or to feel at risk. One man in Lusaka with a six month old baby at home at the time had this to say:

*....I believe I have already passed the HIV test even though I have not taken one looking at my child because it has no signs of any sickness. (father).* One woman on the other hand had also this to say:

*....You can know if baby doesn't grow well... between 1-6 months baby is okay except when we see rushes that's when we start suspecting.....(breastfeeding mum)*

While accepting that they could still breastfeed, most also admitted that because they had not taken the test they would breastfeed with a lot of doubts and suspect that they were infected if their children got some fever. Such views about looking for some symptoms in the child was well supported especially in the men's focus group and even by some women who apparently also use their own children health as a proxy for their status. Such kind of false confidence in the health of the child using signs and symptoms could be detrimental to the PMTCT programme and affect the uptake of VCT.

#### **4.3.4 The HIV status as a determinant of feeling at risk of HIV infection.**

Those that have taken an HIV test feel even if their husbands may not be trusted they at least have tested negative in the past and so they feel confident to breastfeed. How a woman feels during pregnancy and subsequent delivery might determine the decisions she makes about breastfeeding.

Few have taken the HIV test mainly because of fear that if they test positive they might die from depression. Some claimed they did not go for a test because they felt strong and healthy and so they saw no need.

#### **4.3.5 When they feel most vulnerable**

Most of them agreed to the idea that they feel very vulnerable to being infected especially when they start getting constant bouts of diseases which they never used to get in the past. For the women they also feel most vulnerable during pregnancy. They assess their own health during this period.

#### **4.3.6 Whether or not they could still breastfeed**

People react differently to the fact that HIV can be transmitted through breast milk. For some this information has not exactly altered their feeding method because of the belief that the risk of infection whether mixed feeding or exclusive breastfeeding is the same. *'In terms of feeding method, it has not affected me much because the risk of infection is the same whether mixed feeding or exclusive breastfeeding'*; according to this 39 year old father of six who had a nine month old baby at the time of the interview.

Some women said they would breastfeed also because of the value of breast milk, their apparent good health status, and their HIV status and that the child had the right to breastfeed. Some also mentioned the fact that they could still breastfeed even if found positive because they could not afford to buy infant formula. If they suspected then some said they would still breastfeed because its just suspicions while others felt it is better to go for a test if suspecting 'instead of punishing the baby'.

In Lusaka most of the women said they would at least breastfeed for 3 months if they were infected as according to them, this time the children had not started teething. This desire to breastfeed for a short period even if infected is the only striking difference that was observed between Kitwe and Lusaka in terms their attitude towards breastfeeding when there is HIV. This of course could be explained by the exposure that these women have had on prevention of mother to child transmission of HIV.

For others they could still breastfeed because they have no other option and believe 'its baby's right to breastfeed otherwise it can die of depression'.

As to whether or not to feed their children even when they felt at risk the reactions were divided in the men's group with some saying that is dependant on the health of the mother; meaning that if the mother looked healthy then breastfeeding could continue, and if deteriorating then maybe 'start giving the child soft porridge'. Some still maintained that they could still allow their children to be breastfeed because they believed that child could not get the virus through breastfeeding 'unless the mother has sores on her breasts':

*...Then the mother would have to take good care of herself, eat a lot....continue breastfeeding because the child can't get the HIV virus through breastfeeding unless mother has a sore on the breast, baby can only get virus through mother's blood....(Gmen4).*

A third category felt that coming to the clinic for counselling would be a better option if they were suspecting to be advised on what to do. This view was augmented by the fact that many women mentioned that one way to prevent the transmission was by mother getting the pill that is provided at the clinic during labour which 'makes the virus dormant'. This, according to them, remains potent and helps to prevent the infection going to the child in the first 3 months.

Some also felt that it was the responsibility of the health worker to advise the mother because as health workers they are the 'experts' about HIV transmission. The prospects of having to disclose their status to their husbands, if they had not been counselled together with partners was a source of concern for some women and that is what would force them to continue to breastfeed even if they suspected.

Reference was also made to a situation where they had observed some people who had lived positively by being counselled at the clinic so this is why they felt it was important to go for counselling. Although this view is expressed by few people what comes out is the aspect that someone's ideas are being shaped by what they see in the community.

There were also some elements of fatalism and resignation with regard to whether to breastfeed or not as the following quote illustrates:

*...For me I will just breastfeed because I can't know whether the child has so if we get sick so may it be; whether its me the mother who gets sick earlier or it's the child or the father I can't stop breastfeeding because I would feel pity for the child – there are problems in this community, money is difficult to come by sometimes people resolve to be having a meal a day because they can't afford. And if you have a small child of 4 months whom you have weaned it means even this child will have more problems of lack of enough food – its better to breastfeed – you cannot be going to the neighbours to ask for*



*food otherwise they start asking why you even stopped breastfeeding, you get headache thinking...(George pregnant women's FGD)*

The statement above brings in a number of issues that may be of concern to women regarding whether to breastfeed or not. While she worries about the possibility of infection, she is concerned also about the economic situation and perhaps this may even override her feelings about maternal bonding. This perhaps also shows the complexity of issues surrounding exclusive breastfeeding and HIV.

I will still breastfeed since am already pregnant that is the baby's food and I can not start giving the baby other milk when it is just born because it is different from breast milk. How is it different? Children don't get diarrhoea if they are breastfed. (George pregnant mum)

In Kitwe, regarding whether the woman could breastfeed even with HIV again there were mixed but similar opinions like in Lusaka. Some still felt they could because the child gets infected in the womb so it would not help matters not breastfeed if the child is less than six months. Others still felt they could not breastfeed to help serve the life of the child. Asked if most do afford BMS, they quickly say that is what is forcing most women to breastfeed even if they are HIV -*As a result the health of both the mother and child start deteriorating, especially that food is inadequate. "But with this disease its better to have a good diet, the body is much healthier"*.

For others still *I think it should depend on at what time I get infected. If bear child who looks healthy and test it to show that it has no virus, then I would not breastfeed. But if the child does not look healthy soon after delivery, then its better to just breastfeed. If I have not taken the test, I just breastfeed – though I feel this child will be infected even in the womb because we are the same blood.*

For others, they would still breastfeed even if found to be HIV positive because of the feeling that *'am already pregnant and when the child is born it should first be breastfed because 'that is the baby's food and I can not start giving the baby other milk when it is*

*just born because it is different from breast milk.....Children don't get diarrhoea if they are breastfed. (Pregnant mum)*

Interestingly though, when this woman is asked about who has a higher risk of infection between EBF child and one that is on MF, she says the one who is just breastfeeding because according to her the food can help the one on MF, especially if the mother does not get enough food. Despite the knowledge that this woman exhibits regarding the benefits of exclusive breastfeeding she does not believe it is better in the situation when the mother is infected. She is not able to make the link between mixed feeding and virus transmission. This highlights the beliefs about the value of breast milk in times of infection and the capacity to adequately breastfeed if she is infected. Most of them in Kitwe tended to think that when a woman is infected then the breast milk can no longer provide optimal nutrition to the child hence the need for additional food for the child.

#### **4.3.7 Others do not feel at risk**

While most respondents felt at risk there were some who did not feel that way because they were faithful to their wives and that they trusted each other as couples. Others felt so because they felt they were very strong and had never suffered from any STDs.

From the above presentation, it is clear that feeling at risk of infection may not necessarily lead to change in the feeding patterns of their children as there are other factors that may influence the decisions to alter.

#### **4.3.8 Summary Results on Perceived risk**

Generally almost all respondents said they felt at risk of infection, mainly due to the fact that they were in a relationship and could not be sure about partner behaviour. Despite this kind of feeling, others were breastfeeding while the pregnant ones expressed optimism to breastfeed due to several factors. Maternal health status, especially during pregnancy and the pregnancy outcome if baby seemed ok after birth was mostly used as a proxy to determine their own health status. Apparently some have used the ANC screening to mean that the HIV tests were also done and believe that since the health worker did not mention anything after screening them that was a sign that the mother was

free of the HIV. Those that had in the past taken an HIV test felt confident because of their previous negative test results, even though they did not still trust their husbands.

Those who said they did not feel at risk felt so because of the trust that they had in their partners, because they felt strong and had never suffered from STDs. What this data suggests is that feeling at risk may not in itself lead to altering the feeding methods but that there are other factors that are considered.

Whether or not they could breastfeed would be determined by their own health and HIV status. The nutritional value and protective properties of breast milk seemed also a deciding factor even though they felt at risk, for others the baby had the right to breastfeed anyway; others still the question of affordability of breast milk substitutes. Lusaka participants seemed more willing to breastfeed at least for three months, according to them that time the child would not have teeth or open gums that exposes it to infection.

## **5.0 Discussion**

This study is important as it brings to light the perspectives of attitudes and practices of the women whose HIV status is not known but living in areas where there is a programme to prevent mother to child transmission of HIV and comparing with an area where PMTCT had not been implemented. Previous studies have examined feeding practices of HIV mothers following advice from a range of sources, (37) or the feeding practices of non pregnant women prior to MTCT implementation.(33, 34, 51),

The general objective of the study was to explore and have an in-depth understanding of the community perspectives of promoting breastfeeding in an era of HIV. To achieve this it was important to first establish and understand what the participants know about mother to child transmission of HIV through breastfeeding. It was important also to understand their breastfeeding practices with a view to assessing their attitudes and perceptions regarding breastfeeding and HIV.

The discussion focuses on whether or not the communities are likely to abandon breastfeeding in view of the current HIV infection threat due to breastfeeding based on their knowledge and benefits of exclusive breastfeeding, risk factors for HIV transmission, prevention measures, perceptions and attitudes regarding breastfeeding and HIV. While most of the participants show that they know breastfeeding as a route of infection, data from these sites suggest that there are variations in terms of knowledge levels among the study participants regarding MTCT of HIV through breastfeeding. As far as possible the feeding practices related mostly to exclusive breastfeeding.

Data suggests that many women expressed the desire to exclusively breastfeed due to health and nutrition benefits of breast milk. For most of them previous personal positive experiences with exclusive breastfeeding or experiences of some negative effects of early introduction of solids before six months were the guiding factors. The major concern for not introducing foods early was to reduce cases of diarrhoea. In Zambia, diarrhoea is one of the main causes of morbidity in children. The current ZDHS suggests that about 20% of children under five years had a bout of diarrhoea at about two weeks preceding the survey and that of those slightly more than four in ten children were taken to a health facility for management. (ZDHS) District reports also cite diarrhoea as a major cause of morbidity in young children. Therefore it is possible that the experience of diarrhoea in children could draw these women to practice exclusive breastfeeding. The experience with diarrhoea was part of the dilemma that they were faced with in situations where they may have to opt for other infant feeding method. They were concerned about how this might affect their children's health, coupled with their understanding that a child below six months also got its vitamin A source from the mother. This is understandable because apart from the breastfeeding programme, the country has a vitamin A supplementation programme where children below age six are not supplemented but the mother is encouraged to exclusively breastfeed.

It is not clear therefore to what extent women might abandon breastfeeding bearing in mind these factors which are of concern to them. It is known that vitamin A plays an important role in immune function and maintaining the epithelial integrity of mucosal surfaces. The vitamin A status of a young child may be influenced by several factors

among which could be loss due to infections and parasites. It is also established that absorption of vitamin A is a problem during diarrhoea diseases and therefore pose as a risk factor for the vitamin A deficiency. (52)

The duration of exclusive breastfeeding was however contentious. Mothers described various reasons for early introduction of solids to the child. Main reasons cited were perceived breast milk insufficiency, constant crying of baby, and pressure from significant others; others felt that at 4 months some children start teething, hence the need for solid foods. Other studies have found similar reasons for early introduction of foods. (35, 37, 53) Participants' experiences on the duration of exclusive breastfeeding were also cited as a basis for the decision to introduce foods. The deep rooted belief about the need to provide water to an infant is another source of concern in the feeding practices.

While most of these reasons may not be HIV related, they are important to address as we grapple with whether exclusive breastfeeding could be an option in the context of HIV because we need to provide a balance between these deep rooted practices and the biomedical understanding of the risks and dangers of early introduction of solid foods. Nevertheless, these reasons are similar with those found in the work of Omari, et al (37) in a study of infant feeding practices amongst HIV positive mothers.

Despite knowing that breastfeeding could be a source of HIV transmission the attitudes towards breastfeeding are still positive for many participants because they feel it is safer, and has all the nutrition for a child, has medicines to protect the child, better since child is already born otherwise better not to have children, that its better since even at birth the child can contract the disease and that child can die faster without breastfeeding; better since heard that they have found some drugs to protect the child.

While the attitudes about breastfeeding in the context of HIV still remain positive, the issue of exclusive breastfeeding vis a vis mixed feeding is elusive as an option. The men and women from Kitwe were particularly ambivalent about this. These divergent views seem to result from several reasons arising from both traditional and biomedical influences: First it should be looked at generally in the context of the reasons for early

introduction of solids; then we should consider the participants' perception of HIV infection where some doubt that an unborn child having been in a womb and shared the infected mother's blood could be free from the infection. This was a particularly difficult concept for most of them to envisage. Perhaps the understanding of this relationship should also be viewed from the cultural perspective where Moland (11) reports that woman's milk is her own blood and a life sustaining fluid. The link between breast milk and blood as a source of infection was also cited in another study (34), while de Paoli also reports in her study in Tanzania that women were sceptical about exclusive breastfeeding being an option due to misconception that a child is infected in utero.(28) For such participants, the risk between mixed feeding and exclusive breastfeeding was the same except exclusive breastfeeding could only help to reduce the bouts of diarrhoea associated with mixed feeding and so according to them prolong the child's life even if infected.

It has been found, however, that mixed feeding carries a higher risk of HIV infection than exclusive breastfeeding (21, 25) It is possible therefore that the issue of diarrhoea which seems to be well appreciated could be used as a starting point in designing messages and discussion points that aim at increasing the rate of exclusive breastfeeding during infant feeding counselling.

If indeed exclusive breastfeeding could be an option in the context of HIV another important consideration is how participants perceive the value of breast milk of an infected mother where some felt that when a mother is infected then the breast milk can not provide optimal nutrition to the child hence the need to introduce additional foods to the child. This also has implications for PMTCT implementation. There are two sides to this: that the vitamins in the infected breast milk are not optimal for the child; and that if one is sick and not eating adequate diet they do not produce enough milk for the infant and that it may endanger both the child's and the mother's health. It is not surprising therefore that participants made constant reference to the diet of the mother as a deciding factor in exclusive breastfeeding. It should be appreciated also that most of the participants come from the low income group and food insecurity abounds. A study in Tanzania (54) looking at association between breastfeeding and disease progression

among HIV-infected women found insufficient evidence to suggest that breastfeeding is detrimental to the health of HIV mothers. Particularly, there was no significant association between breastfeeding and risk of anaemia, weight loss or decline in CD4 cell count.

There were not many striking differences in perspectives between the Lusaka and Kitwe data. The data collected was on people that either did not know their HIV status or had tested negative. However, it's worthwhile to note that this study did not screen the sero status of the participants but was based on self reported status. This means that it could be possible that there were some who may have been HIV positive but not disclosed. Nevertheless, as part of selection criteria, those mothers who claimed or known to have been members in the PMTCT projects did not qualify.

These results could also suggest that those mothers who did not participate in the PMTCT programme were not exposed to the focussed counselling on infant feeding that may have been offered to the HIV positive mothers participating in the programme. According to the UN guidelines on infant feeding (6), exclusive breastfeeding should be promoted among mothers whose HIV status is not known or those who are negative. This probably also explains why the participants did not differ much in terms of their attitudes and reported practices towards exclusive breastfeeding. Zambia is one of the countries that have been implementing BFHI where the mother support groups are promoting breastfeeding in the community. Research has so far suggested the effectiveness of peer counselling on exclusive breastfeeding promotion.(55, 56) .

One major difference between the implementation area and the non implementation area was knowledge on the risk factors. Participants in Lusaka appeared to be more knowledgeable about the risk factors for postnatal transmission. Factors such as early introduction of solid foods; breast abscess, were the main ones cited. A few of them also mentioned that it depended on the viral load of the mother. But interestingly, within Lusaka, women from Chipata health centre did not immediately see exclusive breastfeeding as a potential measure to reduce postnatal infection until after probing. According to these women avoidance of breastfeeding was seen as a best option. While

this may be so most of them attested to the fact that many women in the area could not afford BMS for an infant less than six months. As already alluded to, this attitude may be due to the fact that these women are in an area where total replacement feeding was an option offered and provided with infant formula.

Despite the difference in knowledge on risk factors for postnatal transmission of HIV, the attitudes and perceptions with regard to breastfeeding promotion were not very different. Women in Lusaka as in Kitwe expressed similar attitudes and beliefs about breastfeeding and HIV that may both be enhancing and have negative effect on breastfeeding promotion. Other studies have also shown that awareness on HIV transmission did not match with feeding practices among women. (28) This clearly shows that decision making about choices is not only affected by awareness of the facts. The decision whether to breastfeed or not may also involve beliefs about mothering and nurturing, and not only the beliefs of the mother but those of her partner and her community more generally.(32) Furthermore decision making may also be influenced by social networks.(57) This may be seen in the constant references during the interviews about the experiences they have about breastfeeding and HIV in the community.

Choice and practice of exclusive breastfeeding may also be influenced by women's insights regarding breastfeeding and HIV infection and risk of replacement feeds as also reported elsewhere. (47)

The perceived risk of HIV infection in this study was also not sufficient to deter women from breastfeeding. It is important to note that even in cases where people know the risks involved in certain behaviours, they continue with that kind of activity because of personal benefits it provides in areas of life only indirectly related to bodily harm (57). This might be true of participants from this study regarding their attitude to condom use or those that still breastfeed despite their perceived risk about transmitting the HIV virus. Participants described the various factors that made them either to breastfeed or to want to breastfeed despite feeling at risk such as how healthy they felt especially during pregnancy or the health of the child. Another interesting reason cited in all the sites was that some felt that routine ANC screening also included HIV testing. These attitudes and



perceptions may need to be corrected as they may affect uptake of the VCT and ultimately impact negatively on the decisions that women and their partners make regarding infant feeding. In a study looking at acceptability to voluntary counselling and testing in Lusaka, Fylkesnes and Siziya (58) found that poor self rated health was positively associated with willingness to take an HIV test in the age group 25 -49 years old. It is also possible that their attitudes and behaviours maybe so due to the fact that these are women who have not been counselled like the HIV positive mothers on the risks and benefits of exclusive breastfeeding.

Others have also argued that since human beings are cultural beings and therefore they can have different conceptions of risk and can have different conceptions of what are appropriate actions in case of risk. (59). Some women despite feeling at risk of infection continue to breastfeed because they believe the risk of infection in the child is the same whether one breastfeeds or not. Consequently for such women, breastfeeding remains the desired option. This also points to the need therefore to ensure that women have the correct information on matters affecting MTCT and breastfeeding.

We have seen from this data how participants have assessed their own risk status and that the decision to breast feed would be determined by the different factors such as maternal health status, that of the child, the HIV status.

A study in Thailand (60) looking at infant feeding practices among HIV positive mothers found that more women were able to formula feed despite the fact that these women still considered breast milk as more superior to the infant formula. This means that for these women for instance they considered the risk of infecting their children over the value of the breast milk and made decision to formula feed in order to save their infants. The Thai data also support our own finding that knowledge of HIV transmission through breastfeeding does not alter women's preference for breastfeeding.

Condom use is one of the preventive measures for breastfeeding in order to avoid infection. There were mixed opinions about its use for HIV prevention in the study group, with some suggesting that it can help as a family planning measure and not as a preventive measure for HIV. This is perhaps as a result of the way the condom has been promoted in the past as a family planning and STD prevention. This may have some

connotations in marriage to mean that a condom can not be used in marriage if not for family planning. It is therefore not surprising that the women found it easy to suggest that their husbands might agree to use condoms if told that it is for family planning. This is despite their feeling at risk of infecting their child through breastfeeding. Similar results about condom use were found in a study in Nigeria where both husbands and wives could not allow the use of condoms in the home. (61)

It is imperative therefore that advocacy by WHO for a shift in emphasis in the family planning programme is intensified, with greater attention being given to simultaneously preventing infection and pregnancy. Condom use has to be repackaged so that it is more acceptable as a prevention measure for MTCT.

One reason why some people felt that it could not work as a prevention measure was because they believed the issue of prevention could not come in a situation where someone was already infected with the virus. This is an important point for consideration in education messages designed for PMTCT. It is probable that this attitude is a result of the fact that these people may not have been counselled about the concept of safer breastfeeding since the focus is on those that are HIV positive.

Uptake of VCT is low and there are several factors that hinder the uptake. Many respondents mentioned that they did not see it necessary to take the HIV test unless in situations when one partner becomes constantly ill. In another study, poor self-reported health was positively associated with willingness to take an HIV test in a study that looked at factors associated with readiness for VCT. (58) However, women seem to be receptive to the idea that a health worker is in a position to help the mother make decisions about breastfeeding. Most of the respondents may not have received individual counselling required to help to clear some of those concerns that women have about HIV and breastfeeding. It is imperative therefore, that measures are taken to strengthen infant feeding and HIV counselling to go beyond the HIV infected mothers. Breastfeeding support groups should be revived to try and fill the gap for counselling. Peer support has

been found to be very effective to work to help mothers to exclusively breastfeed according to several studies (49, 55)

There are however socially acceptable reasons for weaning a small child earlier. Knowing that it is acceptable to wean a child because lack of insufficient milk, travel or other acceptable reasons, means that this could be adopted as a policy without compromising confidentiality regarding women's serostatus.

## **6.0 Conclusions and Recommendations**

In both sites in Lusaka there was adequate knowledge of the possibility of transmitting HIV infection through exclusive breastfeeding. While there was some amount of knowledge on breastfeeding and HIV, especially with regard to risk factors for HIV transmission in Lusaka, this knowledge was not matched with the attitudes about Breastfeeding. This knowledge was rather limited in Kitwe, even though women seem to appreciate the benefits of exclusive breastfeeding.

This study was able to detect the rich interplay of factors involved in breastfeeding when there is a threat of HIV beyond knowledge factors. It also shows that women are faced with a lot of dilemmas in making decisions on infant feeding in the context of HIV/AIDS arising from both biomedical and cultural influences. It is important therefore that those involved in Prevention efforts for mother to child transmission of HIV take stock of these and use them as entry points for counselling on infant feeding options.

The data also suggest that knowledge about chances of infecting the child with the HIV through breastfeeding may not in itself affect the infant feeding decisions but that their own experience with exclusive breastfeeding, that of the immediate neighbours and indeed their own traditional knowledge, including attitudes that they hold about breastfeeding and HIV may be factors. The decision either to breastfeed or not may also be influenced by the mothers own perceived risk of contracting the virus and passing it on to the infant.

While the possibility to abandon breastfeeding is not apparent from these data, the practice of exclusive breastfeeding in the context of HIV seemed elusive and was received with a lot of mixed feelings, especially in Kitwe and by some men due to their conception of HIV transmission and the blood and milk relationship and their perception of the value of the breast milk when the mother is infected. It is therefore important that

these issues are taken into consideration and addressed in strategies designed to improve counselling on infant feeding.

From the analysis, it can be concluded that choice on feeding options is not a one dimensional behaviour but rather dynamic and influenced by changing internal and external variables. The social environment has a role to play in the attitudes exhibited by participants and consequently this has important implications for the adoption of behaviour regarding infant feeding in the context of HIV transmission. Efforts to integrate infant feeding in PMTCT should also harmonise with other programmes that aim at improving food security of families as this was an important concern which may hinder the practice of exclusive breastfeeding.

The ambivalences and uncertainties that exist about breastfeeding and HIV can play both positively and negatively towards infant feeding counselling during HIV. It is important therefore that counsellors understand the different risks and benefits of breastfeeding from the mother or community point of view and try to counsel women on a case by case of issues of concerns to a woman. In order to increase the interaction and better understanding these issues that are of concern to the mothers regarding infant feeding in the context of HIV, it is recommended that counselling should be more focussed. Revitalisation and strengthening of the community support groups for infant feeding is one way that may help ease the burden placed on the health workers.

Most of the respondents reported not to have taken an HIV test. This is one reason cited for still breastfeeding. The fear of the outcome of the test also was a factor, especially that most of those that showed willingness to take the test preferred to have couple counselling. This opinion was shared between both the fathers and the women. It is there recommended that couple counselling should be encouraged in VCT in future PMTCT programmes.

This study was purely exploratory in nature aimed at providing insight about peoples perceptions about breastfeeding and HIV, therefore could not establish to what extent

these opinions exist in the community. It may be necessary for a cross sectional design that establishes the extent of these perceptions. While the study results may not be generalisable to a wider population nevertheless provides insights about issues of breastfeeding in the context of HIV/AIDS that are important for programme implementation as the country continues to integrate infant feeding counselling in PMTCT.

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## **Appendix I**

### **REQUEST FOR PARTICIPATION**

This country has been working on programmes to prevent or reduce the transmission of HIV from the mother to the child for some time now. There are different ways in which the government is trying to do that. One way is through modification of infant feeding methods. I work for the National Food and Nutrition Commission and we are interested to see how this programme is working. I am currently a student at the University of Oslo,

working on a project to assess how people view the issue of promoting breastfeeding in an era of HIV/AIDS.

I would like to find out a few things from you concerning your opinions on this subject. The information you will provide will be treated confidentially and shall not be used for any other purpose other than for the production of the report. I realize that your views are important to help us in the future implementation of this programme. If you do not wish to participate in the study, it does not affect you in any way in terms the services you get at this facility.

The interview is expected to take about 45 minutes to 1 hour. (For those FGDs participants the expected time is about one hour and thirty minutes). Kindly sign below if you have no objections to participating in this study.

### **Consent Form for Study Participants**

I understand the purpose of this study and have accepted to participate from my own accord, without being forced to do so.

Signed..... Date.....

Witnessed By

.....Date.....

## Appendix II

### Interview Guide

In-depth Interview Guide\* For Pregnant women and mothers of children 6 months and below and Men

Interview no \_\_\_\_\_

Location \_\_\_\_\_

Status: Pregnant / Lactating

**Introductions:** Explain the purpose of the interview again, make the respondent relax, assure confidentiality of information they provide and thank them for their time. Make them feel that information they are going to provide is important to help make decisions on infant feeding for the benefit of our children

#### 1. Current and past infant feeding practices

Please tell me about your experiences with breastfeeding :  
Probe for

Feeding method now/past?

Reason for choice of method? Benefits/disadvantages

Who's consulted on feeding method, Why?

\*\*What kind of role played, if any, in child's infant feeding methods?

Could you please explain how you view breastfeeding now as compared to the past experience?

What are some of the things that you think have changed in terms of breastfeeding now and before?

#### 2. Factors affecting mothers' choices of infant feeding options

Do they feel some kind of pressure to breastfeed from spouse? Others? what would prevent a mother from breastfeeding

Social stigma: what would happen to a mother who chooses not breastfeed?

How does the community perceive women who do not breastfeed? Is it any different from the way they were perceived previously

#### 3. Knowledge on infection of HIV to infant

**Could you please tell me what you know or have heard about HIV and MTCT: probe for:**

When is the woman likely to pass the virus to a child (Risk factors for MTCT of HIV)

Do you consider your self at risk of transmitting virus to your child (Risk perception).

Explain reason(s)

If you suspect that you are infected but do not want to take the test how would you feed your baby? Do you think this is likely in a lot of women? Tell me more about that

Compare EBF and mixed feeding

#### **4. Information on MTCT and infant feeding (breastfeeding)**

How did you learn about MTCT transmission of the virus?

How has the information you have heard affected you in terms of feeding choices for your children now and before?

So how do feel about breastfeeding now( that there is HIV)? What about exclusive breastfeeding? Is it still worth promoting? Please explain

In which situations do you sometimes consider yourself vulnerable to transmitting the virus to your child?

#### **5. Prevention methods**

In your opinion, what do you think is the best method to reduce HIV infection to a child?

Probe for

Various feeding methods

Safer breastfeeding?

Do you see any major problems with any of the ways you have mentioned? (In terms of health to children, feasibility and practicality)

What do you think about a mother testing for HIV? Would you go / allow your spouse\*\* to go for an HIV test? Please explain.

*\* The same guide was used to guide the FGDs for these groups of women, stressing on the gaps identified during in-depth interviews*

*\*\* Applies to men*